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Teachers' Attrition: Relationship Between Principals' Communication and Teachers' Job Satisfaction

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Teachers' Attrition: Relationship Between Principals' Communication and Teachers' Job Satisfaction

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Abstract

This study investigated the relationship between teachers' job satisfaction and teachers' satisfaction with their salary, the number of years teaching, and the principals' communication about the kind of school they want. Teacher attrition in the K–12 public school system is a well-documented problem citing many motives and causes. The recruitment of educators and retention of teachers in public schools has vastly decreased, creating a significant teacher shortage problem. Resulting complications are fewer applicants for open positions, applicants without the desired licensure, added stress on current teachers to fulfill duties, decreasing student academic progress, and dissatisfied teachers. This quantitative study used pre-existing data from the 2020–2021 National Teacher and Principal Survey (NTPS) provided by the National Center for Education Statistics (NCES) to determine the significance of Minnesota public school teachers' job satisfaction in relation to teachers' satisfaction with their salary, the number of years teaching, and the principals' communication about the kind of school they want. The correlations were tested using a binary logistic regression. The results indicated teachers are more satisfied in the profession when principals communicate the kind of school they want. Teacher satisfaction with their salary was also highly correlated to overall job satisfaction, but the number of years teaching was not. Future research could compare teachers from various states using the same variables to determine if the results are similar across the nation. In addition, future research could narrow the scope of respondents to individual licensure areas and demographics to identify more potential focus areas.

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Chapter 1: Introduction

Teachers are leaving the profession at alarming rates and the common motives of student behavior, burnout, or large class sizes may not be to blame. Teachers' attrition impacts more than students and knowing detailed causes may help lower the high percentage of teachers leaving the classroom. Fifty-five percent of teachers leave the profession because of dissatisfaction, and one of the specific reasons is unhappiness with administrative practices (Sutcher et al., 2019). The likelihood of teachers moving schools or leaving the profession nearly doubles when teachers do not believe their administrators are supportive (Carver-Thomas & Darling-Hammond, 2019).

With all potential reasons considered, 8% of teachers nationwide leave the profession each year, and over 50% of teachers will quit before retirement (Abitabile, 2020), which roughly translates to 125,000 teaching positions to be filled each year (Carver-Thomas & Darling-Hammond, 2019). In the United States, the rate of teachers' attrition is double that of other high-achieving countries like Finland and Singapore, which do not face large demands for teachers (Sutcher et al., 2019).

The high teachers' attrition in the United States results in a diminished overall pool of applicants for open teaching positions and an increase in the number of applicants who are not properly credentialed for the posted position (Garcia & Weiss, 2019; Ingersol, 2004, 2014; Sutcher et al., 2016). Crisis-level teacher shortages in the United States were reported prior in the 2015–2016 school year (Ramos & Hughes, 2020). Subsequently, 69% of districts surveyed in 2016–2017 did not have enough applicants for open positions (Sutcher et al., 2019). In Minnesota, 263 out of 375 district leaders indicated the teacher shortage significantly or very significantly affected their district (Minnesota Professional Educator Licensing and Standards Board [PELSB], 2021). The decline in 1st-year teachers in Minnesota from 3,107 teachers in

2015-2016 to 1,964 teachers in 2019-2020 means it is more important than ever to retain existing teachers (PELSB, 2021).

There are numerous variables and specific life situations influencing attrition. It is worthy to compare principals' significance to other frequently argued reasons for teachers leaving the profession because of the magnitude of the attrition problem (PELSB, 2023). In June 2022, 30% of teachers who left the profession indicated that poor school climate was a contributing factor, and 71% indicated that unsupportive administrators were the reason for the poor school climate (PELSB, 2022). Additionally, 62% indicated that low pay was a reason for leaving the profession (PELSB, 2022). Teachers' salary satisfaction and the number of years they have worked in the profession are associated with teachers' attrition (PELSB, 2023).

Experts have suggested that it is important to study how school administrators may increase teachers' satisfaction and what can be done to decrease teachers' attrition (PELSB, 2023). Many variables could be studied as reasons for teachers' attrition and teachers' satisfaction. A quick internet search about teachers' attrition produces over 6 million results, demonstrating the problem is local, national, and global. This study will include teachers' satisfaction with their salary, the number of years teaching in an elementary or secondary public school, and principals' communication about the kind of school they want.

Statement of the Problem

The teachers' attrition strain causes added stress on the daily duties of school administrators and district managers. Teachers are human capital, and the shortage of human capital makes an administrator's job much more difficult (Arviv-Elyashiv & Navon, 2021; Dupriez et al., 2016; Ingersoll & May, 2012; Sutcher et al., 2019). The professional relationships between communities of teachers within their schools and districts are also negatively impacted

because it takes years to develop a collaborative working environment (Guin, 2004). Relationships and trust between staff members and their students can predict levels of student achievement as there are developed norms between teachers and students that can be disrupted when turnover occurs (Bryk & Schneider, 2002). Modified and altered relationships can impact student achievement because the relationship patterns are changed and no longer predictable or consistent (Little, 1982).

However, the degree to which the achievement is disrupted depends on the current climate and culture of the school and the ability of those already on staff to continue their relationships with new teachers (Ronfeldt et al., 2013). Added pressure, time, and energy on current teachers to continue a culture of high effectiveness and mentorship for new hires can take a toll on climate and culture as current teachers are taking on more tasks. Added tasks and pressures are a reality, especially true in our nation's underserved schools as statistically more new-to-profession teachers are hired and require more support (Carroll et al., 2000; Darling-Hammond & Sykes, 2003).

Teachers' Attrition Background

Attrition in the educational field is when teachers leave the profession for an employment opportunity outside of education or simply exit the profession and cease working. In 2020, the United States teacher supply shortage was around 100,000 teachers, which is expected to double by 2025 (Hanover Research, 2019). The national average cost of replacing a teacher was between $4,400 and $18,000 in 2007 (Carroll, 2007). Just over a decade later, in 2019, the national average cost was $21,000, which led to further consequences of increased expenses, lost knowledge of curriculum from leaving staff, overburdened teachers assisting new staff, and a plummeting sense of community (Hanover Research, 2019).

Teachers' attrition may be receiving more attention than ever before, but the difficulties faced by school districts have occurred for decades. Teachers' attrition is especially evident in specific licensed areas such as math, science, career and technical education courses, and special education (Ingersoll & Perda, 2010; Sutcher et al., 2019). In Minnesota, districts reported that 41.8% of math, 58.9% of life sciences, 59.7% of career and technical education, and 47.8% of special education positions in public schools were very difficult or not able to be filled (National Center for Education Statistics [NCES], 2021).

Districts with high attrition have empty classrooms or teachers who are not highly qualified because of the growing attrition rate and declining number of students graduating with a degree in education (Nguyen & Kremer, 2022; Snyder et al., 2018). Teachers from a comprehensive program with pedagogical preparation are less likely to quit in their 1st year of teaching at a rate of 10% when compared to 25% of those entering without proper preparation (Ingersoll et al., 2014). The modern attrition problem is exacerbated by the suffering enrollment of teacher preparation programs as enrollment decreased by as much as 35% to 23% between 2009 and 2014 (Sutcher et al., 2019). Meanwhile, K–12 student enrollment has been increasing across the United States and is projected by the National Center for Education Statistics to increase from 50 million students to 53 million students between the years 2016 and 2025 (Hussar & Bailey, 2014; NCES, n.d.-d.; Sutcher et al., 2019).

The discrepancy in the supply and demand teacher market demonstrates how the teacher supply shortage could double in a 5-year span due to the increasing student population and the annual attrition rate of 8% and 55% of teachers leaving before retirement (Abitabile, 2020; Sutcher et al., 2019). Districts may need financial support to recruit and retain teachers as the total replacement costs of teachers in the United States was nearly $8,000,000,000 a year in 2019

(Sutcher et al., 2019). Historically, districts may have been able to develop solutions, but the rapid increase of qualified teachers leaving the profession is leading to new ideas and licensing options. However, those solutions have also been met with their own criticisms and difficulties.

Perceptions and Causes of Teachers' Attrition

There are many factors contributing to teacher's attrition that it can be difficult to identify and implement solutions. Factors such as finances to recruit teachers and disproportionate salaries have been heavily researched and so widely accepted as the cause of attrition that other potential contributing factors have not been researched appropriately (Ramos & Hughes, 2020). Burnout is one example of a heavily researched factor and is defined as chronic stress leading to physical and emotional exhaustion, cynicism, detachment, and feelings of ineffectiveness and lack of accomplishment (Carter, 2013). Understandably so, burnout is a leading contributor to attrition and researchers agree it is a serious issue. Burnout is often paired with dissatisfaction in the profession and causes of attrition, but solutions to burnout frequently focus on individual life adjustments to decrease the burnout sensation (Kersaint et al., 2007; McCarthy et al., 2010; Sass et al., 2011; Skaalvik & Skaalvik, 2011, 2017).

Teacher retirement accounts for roughly one-third of the yearly turnover while two-thirds of attrition can be attributed to other factors such as yearly staffing decisions, personal life changes, and dissatisfaction with the profession (Harris et al., 2019; Sutcher et al., 2019). Dissatisfaction with the profession leads to 29% of teachers leaving the profession (Ingersoll & Smith, 2003) and the top reasons of dissatisfaction are working conditions, interpersonal relations, and salary (Fielding et al., 2005). Secondary teachers are more likely to leave than their elementary counterparts; and teachers in the science, technology, engineering, and mathematics (STEM) fields experience higher attrition rates than those in other departments (Borman &

Dowling, 2008; Snyder et al., 2018). The discrepancy is largely due to secondary and STEM teachers having advanced subject knowledge and credentialing that transfers to other professions with higher achieving salaries.

There are career opportunities in other fields for educators, leaving the door open for licensed teachers to leave and those looking for a career change without a proper license to enter. American workers expressed satisfaction in the workplace as a priority and would work for a lower salary if it led to higher job satisfaction (Davis, 2013). Principals are directly involved with the working conditions of a school and can influence teachers' retention as long as they dedicate energy to high levels of organizational commitment through thoughtful management (Holmes et al., 2019). The problem lies with principals not knowing how to influence retention or not recognizing how their current practice may be contributing to attrition.

Teachers are accustomed to serving and providing as their scope of duties is to build the academic capacity of students through the delivery and service of educational standards (Gunduz, 2016). Therefore, teachers frequently wish to serve in other roles to support the growth and development of students, their colleagues, and themselves. Teachers' perception of leadership qualities is a strong indicator of their attrition; therefore, principals should consider the shared leadership opportunities they provide and the power of their communication with teachers (Sulit & Davidson, 2020).

The Impact of Teachers' Attrition on Students' Achievement

Teachers' attrition has been shown to negatively affect students' learning and relationships with their teachers (Kini & Podolsky, 2016; Liu & Meyer, 2005; Ronfeldt et al., 2013). School leaders invest vast amounts of resources in their instructional staff and when those instructors leave, so does their knowledge of how to implement the instructional programming of

the school (Abelson & Baysinger, 1984; Guin, 2004). The recurring investments delay initiatives as continuously repeated resources for new teachers are necessary to develop knowledge of the instructional resources and operational procedures (Ronfeldt et al., 2013). Lower academic achievement has been linked to schools with higher teacher turnover rates (Darling-Hammond, 1999; Garcia & Weiss, 2019; Ladd & Sorensen, 2017; Ronfeldt et al., 2013). Retaining teachers can protect districts' financial investments and gain higher student achievement (Kini & Podolsky, 2016; Liu & Meyer, 2005; Ronfeldt et al., 2013).

If there is a difference in quality and effectiveness between teachers, the difference may lead to a positive or negative effect on achievement (Ronfeldt et al., 2013). Even when a newly hired teacher is as effective or more effective than the previous one, turnover can still impact students' achievement as well as the quality of relationships and trust among staff (Ronfeldt et al., 2013). According to Ronfeldt et al. (2013), "When leaving teachers are on average worse than those who replace them, the compositional effect of turnover on student achievement is positive; if leaving teachers are better than the ones who replace them, the compositional effect is negative" (p. 1). The findings of compositional turnover demonstrate that not all attrition equates to lower student achievement but does contribute to other financial and cultural factors throughout entire organizations and individual schools.

The trickle-down effect of attrition often leads to large class sizes, underqualified staff, and the elimination of elective classes (Ramos & Hughes, 2020). The elimination of programming or allocation of funds to other areas of necessary improvement suffers as the cost to retain teachers and train teachers without the appropriate licensure area siphons those funds (Barnes et al., 2007; Carroll et al., 2000; Darling-Hammond & Sykes, 2003). The relationship between teachers and principals may suffer since the typical environment and workload are no

longer favorable for teachers when funds are not available to maintain or improve working conditions. The principal may need to reflect on the possibility of their own contributions to teachers' attrition when working conditions diminish.

Principals' Contribution to Teachers' Attrition

Teachers and administrators often have differing perceptions of the cause of high attrition (Harris et al., 2019). Teachers leaving within the first 3−5 years frequently indicate expectations from principals are unrealistic (Cells et al., 2023). Researchers focused on principals' interpersonal relationships with teachers and its relationship with teachers' attrition, which primarily centered on team-building activities, retreats, and culture-building training. Consequently, those strategies do not necessarily include communication of expectations (Harris et al., 2019). Team building activities typically focus on relationship development between teachers and their principal (Morrison & Thompson, 2021), but may not specifically address potential misunderstandings of the kind of school the principal wants. Misunderstandings may leave teachers unsure about how they contribute to the school's success.

There is a lack of understanding of the impact of principals' communication on teachers' job satisfaction and retention (Arnup & Bowles, 2016; Ediger, 2014; Mull, 2020; Neves & Eisenberger, 2012). The communication skills of a principal and delivery of the kind of school principals want warrants proper research as effective communication can establish an environment of trust (Neves & Eisenberger, 2012; Salamondra, 2021). While communication between principals and teachers are natural hierarchical interactions, there can be a different approach to communication as principals deliver the kind of school they want as an action to increase job satisfaction (Aamir & Buckley, 2009). However, through limited research, various attempts indicate principals' behaviors are not directly aligned with teachers' job satisfaction.

Certain behaviors may increase work motivation, which can correlate to job satisfaction (Collie et al., 2016; Davis & Wilson, 2000; Lee & Nie, 2014). Evident in the Minnesota Professional Education Licensing and Standards Board (PELSB) (2022) findings, Minnesota public school teachers highly attributed their principals' influence to their satisfaction in the workplace and a reason for leaving their current school of employment.

School leadership is critical to a teacher's working conditions (Ansley et al., 2019). Teachers have identified important leadership characteristics such as support with school policies, mentorship, teacher inclusion in school-wide decision-making, and regular communication and feedback as necessary qualities of principals (Simon & Johnson, 2015; Stewart-Banks et al., 2015). The absence of these characteristics is part of conversations among teachers sharing disapproval of principals' leadership and the impact on their decision to leave their school or profession entirely. It is uncertain if teachers who stay longer in the profession are naturally more satisfied, though experienced teachers are more productive than novice teachers (Henricks, 2015).

Principals' ability to influence their staff through communication about the school they want may lead to desired outcomes of understanding if a principal's communication of the school they want is significant to teachers' job satisfaction or if other factors demonstrate a greater relationship. The results will determine where energy and focus should be placed if the education profession desires to slow the attrition rate of teachers. Focus and energy have already been attempted to incentivize teachers in areas of (a) mid-career change programs to attract professionals to teaching, (b) alternative certification programs for career-changing professionals to begin teaching immediately, (c) global recruitment strategies, and (d) financial incentives from bonuses to loan forgiveness and even housing assistance (Cooper & Alvarado, 2006; Harris et

al., 2019; Ravitch, 2016). School leaders have a duty to staff, students, and their community to retain teachers and increase job satisfaction (Mull, 2020), but to do so there must be an understanding of the significance of the problem and other options that may need to be explored and implemented.

The education field is cognizant of how school leadership from administrators, along with other job-related aspects such as salary, relationships with colleagues and students, and workload can contribute to teachers' satisfaction levels (Conley & You, 2009; Horng, 2009; Johnson et al., 2012; Moore, 2012). However, what is missing is the assessment of the relationships between the variables. Education professionals are desperate for answers and willing to invest in solutions to the teachers' attrition problem. Current ideas and solutions are causing large systemic changes and the timeline of the effects are yet to be determined. Therefore, gaining further understanding of the potential influence of a principal's communication on attrition is worth comparing to other proven influential variables.

Purpose of the Study

The purpose of this study was to determine if there is a relationship between the dependent variable of teachers' job satisfaction and the independent variables of teachers' satisfaction with their salary, the number of years taught, and the principals' communication about the kind of school they want. This quantitative study used pre-existing data from the 2020–2021 National Teacher and Principal Survey (NTPS) provided by the National Center for Education Statistics (NCES) to determine the significance of Minnesota public school teachers' job satisfaction in relation to the three previously listed independent variables. The correlations were tested using a binary logistic regression.

Research Question

Are there statistically significant ($p < .05$) relationships between the independent variables of Minnesota public school teachers' perception that their principal(s) communicate the kind of school they want, salary satisfaction, length of time working in the profession, and the dependent variable of teachers' job satisfaction?

Null Hypothesis

There are no statistically significant ($p > .05$) relationships between the independent variables of Minnesota public school teachers' perception that their principal(s) communicate the kind of school they want, salary satisfaction, length of time working in the profession, and the dependent variable of teachers' job satisfaction.

Alternative Hypothesis

There are statistically significant ($p < .05$) relationships between the independent variables of Minnesota public school teachers' perception that their principal(s) communicate the kind of school they want, salary satisfaction, length of time working in the profession, and the dependent variable of teachers' job satisfaction.

Significance of the Study

Studies, mostly from an organizational perspective (Arviv-Elyashiv & Navon, 2021), discussed many reasons for teachers' attrition. Teachers leaving the profession have identified their lack of administrative support and input to decision-making as just as strong a factor as any, but principals who communicate the kind of school they want have the potential to have a stronger effect on teachers' satisfaction (Chen & Yuan, 2021; Mattingly, 2007; Sutcher et al., 2019). The majority of research details various leadership qualities (Kars & Inandi, 2018; Northouse, 2012) and communication styles to build trust (Shepherd-Jones & Salisbury-

Glennon, 2018), but research is sparse to provide how principals can or should communicate what they want in a school. With the results of this study, principals may have a better understanding of how to address teacher attrition through their own capabilities.

Teachers' retention is associated with satisfaction with principal leadership and overall job satisfaction to stay committed to the organization (Betancourt-Smith et al., 1994; Reyes & Shin, 1995; Zigarelli, 1996). Teachers' salaries have demonstrated slight job satisfaction (NCES, 2018b), but are not highly correlated as it may appear that salary increases are a major request from teachers (Liu & Ramsey, 2006). However, the higher number of years in the profession is a strong indicator of job satisfaction (Liu & Ramsey, 2006). The gap in research lies in the determination if a principal communicating the kind of school they want has a greater relationship with teachers' job satisfaction when compared to a teacher's satisfaction with their salary and the number of years in the profession.

District Funding Allocation

There is potential for this study to determine where the focus should be placed to retain teachers. This study may inform aspiring or current administrators about an achievable, simplified, and cost-effective solution to retain teachers beyond broad salary increases which are expensive for districts (Urick, 2020). In addition, findings may guide professional development fund allocation aimed at retaining teachers until they are eligible for retirement.

School Leadership Practices

Caring principals take ownership and value high levels of commitment from teachers to operate a successful school (van der Vyver et al., 2014). Principals sharing the kind of school they want may lower attrition at their school simply by the manner in which they communicate. Transformational leadership strategies have been positively correlated with leader outcomes of

organizational effectiveness and follower satisfaction, so it is time principals use the transformational framework with their teachers (Hooijberg & Lane, 2013). Study findings may inform principals' reflections on their communication styles and the influence of their communication on teachers' job satisfaction. The results of this study may help educational leaders understand the degree of the relationship and provide guidance on the potential impact of principals communicating the kind of school they want to increase teachers' job satisfaction.

Definition of Terms

For clarification and contextual understanding, the following terms are defined:

Attrition

Attrition is when a teacher leaves the field of education for non-education work (Borman & Dowling, 2008). Teacher attrition includes retirement.

Beta Coefficients

This is the amount of change in the dependent variable for every one-unit change in an independent variable, holding all other independent variables constant (NCES, n.d.-a).

Communication

Communication is the interactions and transmission of information between multiple people and the process of how that information is shared (Hunt, 2007).

Likelihood Ratios

The probability of observing the outcome given the input data and the model (NCES, n.d.-a).

Logistic Regression

A statistical process that estimates the relationship between each independent variable and the probability that the dependent variable equals 1 while controlling for all other independent variables. Logistic regression is best for binary dependent variables (NCES, n.d.-a).

Mission

A statement about why a school organization exists and its fundamental purpose is its mission (Gurley et al., 2015).

Odd Ratios

The strength of the association between the characteristic or event indicated by two variables is the odd ratio. A result greater than 1 means the presence of the characteristic or event indicated by one variable increases the likelihood of the characteristic or event indicated by the other variable. A result of 1 means there is no association between the characteristics or events indicated by the two variables. A result of less than 1 means there is a decreased likelihood of association between the characteristics or events indicated by the two variables (NCES, n.d.-a).

p-value

The *p*-value is the probability of obtaining the observed results when the null hypothesis is true, i.e., when there is no statistical difference between the parameters or estimates being compared. When the *p*-value for a test is .05, we would expect the observed difference to be present in 5% of tests where the null hypothesis is true (NCES, n.d.-a).

Principal

A principal is the head administrator of a school and in charge of daily operations. A principal reports to a superintendent or designee of the superintendent. Principals are tasked with

establishing educational standards, policies, procedures, conducting teacher evaluations, and processing student discipline (Lynch, 2021).

*P*seudo R^2 Values

The standard R^2 is a coefficient for which the range is 0 to 1 that indicates how much variance in a dependent variable is explained by the independent variables. It is a measure of how well a model fits the data. A perfect fit would have an R^2 of 1. A pseudo R^2 helps compare multiple models to the same data set (NCES, n.d.-a).

Retention

Retention is when a teacher remains in the profession and their current position at their school (Lochmiller et al., 2016).

Salary

Salary is the monetary amount of money before the deduction of taxes being paid to an employee. Salary is different from compensation, which includes benefits such as insurance and retirement funds (Education Resource Strategies, 2023).

Teacher

Teachers were defined as staff members who teach regularly scheduled classes to students in any of the grades kindergarten through 12th grade (K–12) (Taie & Lewis, 2022).

Teachers' Job Satisfaction

Teachers' job satisfaction is a combination of the teacher's behavior responses to work experiences. A positive sense of job satisfaction can lead to job loyalty whereas disregard for the importance of the teacher may lead to dissatisfaction with the job (Sultoni & Gunawan, 2023).

Turnover

Turnover is a change in teachers in a specific setting from 1 year to the next due to any reason (Sorensen & Ladd, 2020). This includes teachers staying in the profession but changing to a different position within the school, district, or another school organization.

Vision

A statement articulating the preferred future of a school organization is the vision. The statement can be visualized and measured to gauge if the vision is achieved or needs to be revised (Gurley et al., 2015; Pekarsky, 2007).

Wald-F Statistics

A test to determine if the independent variables in a regression model are statistically significant (NCES, n.d.-a).

Summary and Organization of the Study

This study consists of five chapters, beginning with this first introductory chapter. Chapter 2 is a literature review about teachers' attrition and teacher satisfaction in the profession with particular focus and detail on teacher satisfaction with their salary, the influence of the number of years teaching in an elementary or secondary setting, and teacher satisfaction when understanding the kind of school their principal wants. Chapter 3 described the methodology of the study, which includes the research design, research instruments, reliability of the analysis, theoretical framework, limitations, and ethical considerations. Chapter 4 revealed the results of the study and answers to the research question. Chapter 5 concluded by comparing the findings with existing literature and the implications and recommendations for future research and practice.

Chapter 2: Literature Review

The purpose of this study was to determine if there were statistically significant ($p < .05$) relationships between the independent variables of Minnesota public school teachers' perception that their principal(s) communicate the kind of school they want, salary satisfaction, length of time working in the profession, and the dependent variable of teachers' job satisfaction. The focus of this chapter was to gain further understanding of teachers' attrition by delving into research about teachers' job satisfaction, salary satisfaction, the impact of duration in the teaching profession, and communication from principals about the kind of school they want. Knowledge of each topic and its influence will assist with the ability to thoughtfully compare the variables from the provided literature and when the results are revealed in Chapter 4.

Efforts to retain teachers predominately began in the 1980's as high rates of attrition were occurring. Throughout the 1980's and 1990's, higher percentages of attrition rates fluctuated between 12% and 15% (Borman & Dowling, 2008). Over this period and to this day, more educators are hired to improve the student-to-teacher ratio. However, the demand for teachers becomes increasingly difficult when needing to hire more qualified teachers. Innovative ideas over the past several decades have produced ripples of positive effects on the recruitment and retention of teachers but have yet to solve the problem.

Labor market professionals have not been surprised by staffing problems within the education market. In reality, the ability to predict when demands may be high is rather simplistic since teacher surveys are conducted each year, and other indicators of trends such as: sweeping policy changes, worldly events like the recent COVID-19 pandemic, and labor shortages across multiple professions are marketing for skilled employees. A non-comprehensive list of historical solutions to recruit teachers is Teach for America (n.d.), attract retired professionals, Troops-to-

Teachers (Defense Activity for Non-Traditional Education Support, n.d.), licensure changes to attract college-educated people, and monetary incentives typically supporting student loans (Borman & Dowling, 2008). While programs like Teach for America (n.d.) and Troops-to-Teachers (Defense Activity for Non-Traditional Education Support, n.d.) have filled thousands of open teaching positions with qualified educators, more could continue to be done to recruit and retain highly qualified teachers.

Teacher turnover has been described as a U-shape, with the highest rates of attrition materializing during the initial and later years of teachers' careers (Grissmer & Kirby, 1997). Common sense would say those leaving the profession early in their career identified reasons for an incorrect career choice and those later in their career are retiring. While mostly true and to curb attrition, there needs to be an understanding of the reasons why teachers quit, why teachers seek another school or district, and why teachers retire early. Knowing such reasons is vital for the identification of the support needed to retain teachers and may lead to identifying solutions for greater satisfaction. Satisfaction is a significant factor for retention and with numerous researchers identifying salary, decisions to stay in the career, and most recently the impact of culture and principal influence, those areas must be examined and utilized to retain teachers (Adamson & Darling-Hammond, 2012; Aldridge & Fraser, 2016; Carver-Thomas & Darling-Hammond, 2019; Frahm & Cianca, 2021; Ince, 2016; Kaya, 2022; Tarek et al., 2015).

Teachers' Job Satisfaction

Teachers described job satisfaction as being satisfied with their teaching tasks, colleagues, and principal; their work accomplishments; and their emotional ties to their specific work outcomes or teaching role (Caprara et al., 2006; Skaalvik & Skaalvik, 2011). More generally and simply defined, job satisfaction is the overall feeling of contentment about one's

work from their sense of accomplishments or appraisal received (Locke, 1969; Schleicher et al., 2011). Job satisfaction has been researched extensively and some researchers found satisfaction across multiple professions is correlated with cognitive appraisal (Dawis & Lofquist, 1984), while others found satisfaction in the working conditions, promotion opportunities, salary, and recognition (Corsini, 1999; Dolton & van der Klaauw, 1999).

Teachers expressed how working with children, supportive colleague connections, witnessing student growth, and being part of a positive school culture are influential factors in retaining them in the profession (Cockburn & Haydn, 2004). Many reasons for teachers' job satisfaction have remained the same for decades, which may seem obvious to those in the profession because the educational system has relatively remained the same. With that said, a growing need for autonomy and empowerment has been on the rise as teachers indicated those as factors of satisfaction in the education workplace (Hall et al., 1992; Poulin & Walter 1992). Although, researchers are still uncertain if autonomy and empowerment are associated with job satisfaction (Lee & Nie, 2014). Nonetheless, organizational commitment has stronger indicators of workplace satisfaction when educators are empowered to be involved in school-wide decision-making and have the professional trust of their principal to accomplish organizational goals (Bogler & Somech, 2004; Boyd et al., 2011; Dee et al., 2003; Lee & Nie, 2014). Including teachers with organizational goals will require approval and support from the principals and district-level administrators because schoolwide decisions can influence other initiatives and policies.

Teachers' Salary Satisfaction

Similar to other salaried professions in the United States, teacher salaries greatly differ between locations within and between states. Salaries have been proven to be a contributing

factor in retaining teachers as districts with the ability to afford higher salaries may experience less attrition (Adamson & Darling-Hammond, 2012). Two influential factors of salary differences are the cost of living and the wealth of the population within the district. However, as inflation increases and the job market expands, the margin of salary competitiveness is widening between teachers and non-teachers with similar levels of education (Loeb & Beteille, 2009). Furthermore, teacher salary increases are not keeping pace with inflation and other professions. On average, teachers earn $3,644 less than they did 10 years ago when adjusted for inflation (National Education Association, 2023).

From 1989–1990 to 2016–2017, the average United States teaching salary in constant dollars ranged from 1.7% to 10% lower than the rise of inflation, and even more in particular states (Carver-Thomas & Darling Hammond, 2019; NCES, 2017). The lower salary and slower advancement in pay make recruitment and retention difficult for the educational field when other career opportunities may have more desirable working conditions and salaries. Minnesota's average starting teacher salary is $42,293 and an overall average salary of $64,184, placing the rankings nationally as 22nd and 18th respectively (National Education Association, 2023). While that salary is the middle of the road in America, a significantly lower salary is found to be true in countries around the world when comparing teachers to other professionals with a similar education (Dupriez et al., 2016; Newberry & Allsop, 2017).

Forty-five percent of teachers are satisfied with their salary while 55% are dissatisfied with their salary (NCES, 2018b), so why would teachers stay in the profession when over half disagree with being satisfied with their salary? Researchers have demonstrated some teachers remain in the profession for altruistic and intrinsic rewards (Fray & Gore, 2018), but that alone may not keep enough teachers to meet the demands of the market. Economic rewards are needed

to recruit and retain teachers (Arviv-Elyashiv & Gal, 2017; Ladd, 2007), along with altruistic and intrinsic factors. This is important to note as teachers do not feel appreciated in the profession when their work is not worthy of a higher salary (Inandi et al., 2022).

A higher competitive starting salary is a strategy to recruit teachers from being attracted to other occupations with similar earnings (Carver-Thomas & Darling-Hammond, 2019; Hendricks, 2014, 2015). While a higher starting salary may attract increased volumes of people to the profession, it does not equate to a pool of highly qualified teachers. Rather, higher salaries will help with the retention of teachers most willing to stay and grow in the profession (Clotfelter et al., 2011; Hendricks, 2015; Imazeki, 2005). It sounds simple in theory to increase starting wages so districts have larger pools of applicants and can hire qualified professionals, but if it were simplistic, policy makers and districts would have accomplished teachers' attrition and educational researchers would be off studying the next challenge.

Beginning-level teacher salaries were not as predictive of turnover when compared to districts with a maximum salary of $78,000 or higher (Carver-Thomas & Darling-Hammond, 2019). Meaning that there is a greater correlation between being able to sustain teachers with a higher-end salary than beginning with a higher salary. However, not every district can reach that salary because of the funding structure. In Minnesota, roughly 65% of school district funding is provided by the state, followed by 30% from local government through property taxes, and the final 5% from the federal government (Division of School Finance, 2019). The difficulty for rural schools or those in less affluent areas is the low amount collected within the 30% from their local government to fund their schools. Often, that amount does not help cover costs, so districts rely on more state funding, causing higher state taxes. This situation is not unique to Minnesota

as teachers' attrition is evident across the United States and a foolproof formula has yet to be developed to create equitable funding for all districts and students.

Economists are developing formulas and theories believed to help attract, retain, and adequately fund public schools. For example, Hendricks (2014, 2015) discovered that novice teachers are more responsive to salary changes and can be lured to stay in the profession longer with higher initial salary increases. Other researchers have agreed that young teaching professionals are more willing to search for higher starting salaried positions within or outside the teaching profession so districts will likely recruit more teachers with higher starting salaries (Arviv-Elyashiv & Gal, 2017; Kelly, 2004).

The strategy of initial quicker and higher salary increases each year is developed to retain teachers and surpass the 3-to-5-year mark when statistically most leave the profession. After 3 to 5 years, most teachers start to feel confidence in their practice because they see their impact through student outcomes. Veteran teachers are not as responsive to salary increases and have demonstrated they will continue to stay in the profession with smaller increments because they are productive in their work and may also receive other incentives such as longevity bonuses (Hendricks, 2015).

Grants and Loan Forgiveness

Other strategies to maintain teachers in the profession are offering loan forgiveness and service scholarships. The high cost of tuition has begun to influence the field of study and career decision-making processes of college students, thus opening an incentive for professions to offer monetary support with stipulations in place (Podolsky & Kini, 2016). Most common in the education profession are programs to assist with loan payments in exchange for a 3-to-5-year commitment at a school with a high turnover rate (Carver-Thomas & Darling-Hammond, 2019).

Typical qualifiers for receiving monetary support are to teach in a license area of mathematics, science, or special education, or teach in a school with high percentages of students in poverty or with students of color (Carver-Thomas & Darling-Hammond, 2019). The federal government and the state of Minnesota have their own programs to assist those entering the profession and those already teaching.

The federal government offers the Teacher Education Assistance for College and Higher Education (TEACH) Grant as an option for those entering the teaching profession with the agreement to teach in a low-income area school, in a high-needs licensure area, and complete 4 years of teaching within 8 years of graduating. If this is true for the applicant, they can earn up to $4,000 per year of schooling or will have to repay their loan with interest if not completing all requirements (Federal Student Aid, n.d.-a). The teaching profession is also under the umbrella of qualification for the Public Service Loan Forgiveness (PSLF) program. This program incentivizes professionals working in the public service profession for a minimum of 10 years. If qualified public service professionals make 120 monthly loan payments on time and meet the requirements of their public loan, they can be eligible for their remaining balance to be forgiven (PELSB, n.d.). The federal government also offers the Teacher Loan Forgiveness program for qualified teachers working in a low-income school or educational service agency at a full-time position for 5 consecutive years (Federal Student Aid, n.d.-b). These qualified educators may be eligible for up to $17,500 in forgiveness but may not combine this offer with the PSLF during the same period (Federal Student Aid, n.d.-b).

Minnesota offers the Minnesota Teacher Shortage Student Loan Repayment Program to encourage and reward those teaching in designated shortage areas. Designated shortage areas are those with high demands in specific licensure fields, teaching in a rural school district, or

teachers belonging to an underrepresented racial or ethnic group in the Minnesota teacher workforce (PELSB, n.d.). Funds are limited and based on the number of applicants so those awarded may receive funds paid directly to them in amounts up to $1,000 and a total of $5,000 over the span of applying and being awarded for the forgiveness (Minnesota Office of Higher Education, n.d.-b). Lastly, Minnesota offers the Minnesota Agricultural Education Loan Repayment Program for teachers providing agricultural education for students between fifth and 12th grade. Those awarded can earn up to $3,000 per year and a lifetime limit of $15,000 (Minnesota Office of Higher Education, n.d.-a). While service loans and loan forgiveness are certainly helpful, not all educators can depend on those options. Not qualifying for loan forgiveness may lead to teachers looking for other benefits related to salary as a reason to stay satisfied in the profession.

Pensions

Pensions are a more common retirement option for local and state government workers than those in the private sector (Pension Rights Center, 2023). Eighty-one percent of local and state government workers participate in a pension program, compared to 19% of private sector workers (Pension Rights Center, 2023). The high percentage that represents teachers can lead to the conclusion that pensions are a supportive option and maintain teachers in the profession. Pensions are a monetary retirement arrangement with one's employer to establish a set amount of money from the day one retires to as long as one lives. Teachers in every state of the United States have access to a pension program. Not all pension programs across states are the same but they include similar functions. Pensions are viewed as an added benefit to teachers because it is an added revenue stream in addition to Social Security and other retirement investments teachers may have. Minnesota's pension program is called the Teachers Retirement Association (TRA).

The TRA is a defined-benefit plan. Meaning, the educator and employer make mandatory payroll contributions to the TRA fund, which are pooled and managed by the State Board of Investment (Teachers Retirement Association, n.d.).

Most educators in Minnesota are vested in the program after 3 years of service. Teachers Retirement Association educators contribute 7.75% of pre-taxed dollars from their paychecks. Contributions can change but that is determined by Minnesota state law. The TRA retirement benefit income formula is calculated using the years of service multiplied by the high-five average salary multiplied by a formula percentage (Teachers Retirement Association, n.d.). Between ages 55 and 65, with a minimum of 3 years of service, the educator can begin to receive their benefit, but with a reduced amount. Waiting to receive your benefit until age 66 will allow the recipient to utilize their full retirement benefit (Teachers Retirement Association, n.d.).

State defined-benefit pension plans have been modified and reformed since their inception. Rising pension costs are an added budget restraint for districts, which can have costly effects on retaining teachers as more funds go to retirement accounts than hiring staff. Similarly negative, new-to-profession teachers with lower salaries are seeing a greater portion of their paycheck go towards retirement and a substantial downfall if they leave the profession early without gaining the added benefit of their retirement pension (Kong & Ni, 2023). Conversely, teachers in the middle or near the end of their careers have an added incentive to continue until retirement. This is described as a push-pull dilemma that can push educators out of the system because of the mandatory cost removed from their paycheck and the distant timeline of fruition of retirement. Yet it can pull people to the profession and sustain long-term teachers when knowing there is an additional money stream upon retirement (Kong and Ni, 2023). Teachers

leaving before retirement may have harsh consequences on their retirement benefits, which may result in unsatisfied teachers staying in a profession they do not enjoy.

Teachers' Duration in the Profession

The number of years of teaching strongly indicated job satisfaction (Liu & Ramsey, 2006). However, there may be incentives related to income or benefits that may keep an unsatisfied teacher in the profession. Career commitment includes general definitions of the employee performing to meet the goals and values associated with their reason for joining the profession. Additionally, career commitment is sustaining in one's field until meeting goals and displaying dedication to work for personal and organizational growth (Atmaca, 2022; Khan, 1992). The depth of reasons can warrant expansive explanations for each, and any educational research regarding a teacher's reason to stay or leave the profession will surely provide a breadth of resources. Organizational commitment and vast amounts of reasons to stay in a profession are often true in many organizations throughout the globe. Understandably, not all professions and organizations have similar environments or tasks. Therefore, specific reasons for staying vary greatly.

Career Commitment

Observing reflective choices as to why people stay committed to their profession for many years or an entire career may produce many themes for reasons to dedicate years of your life to a single profession. Authors Meyer and Allen (1991) identified three broad themes of organizational commitment: affective, continuance, and normative. Affective commitment is an employee's emotional attachment and identification with the goals and values of the organization (Bastug et al., 2016). Continuance commitment is when an employee stays because they are aware of the potential consequences of not having this occupation, which often leads these

employees to look and leave for a position with similar benefits or better (Bastug et al., 2016). Normative commitment is the feeling of being indebted to or obligated to stay with a profession because of their own personal beliefs or values (Bastug et al., 2016). The three themes demonstrate the intricacies of a single variable of committing to a career and how the individual traits or experiences of a teacher could be impacted.

Teachers may align with affective commitment by having strong emotional ties to their students, colleagues, or community and identify with the goals and values developed by leadership within the district. Teachers demonstrating continuance commitment may be actively searching other schools or professions fitting their needs but with equal or better salary and benefits as they will not leave until feeling secure. Normative commitment may present in teachers the overwhelming need to stay for the students and because the teacher believes their instruction and education is their purpose. Increased levels of commitment from teachers consisting of initiative and insight to futuristic change demonstrate a willingness to learn and grow, which lead to less teacher turnover (Ince, 2016; Kaya, 2022). However, being mindful of factors reducing the probability of teachers staying, rather than focusing solely on reasonings to get teachers to commit should still be considered and discussed (Celep, 2014).

Data from the 2013 Teacher Follow-Up Survey, from the School and Staffing Survey in the National Center for Education Statistics, was analyzed by authors Sutcher, Darling-Hammond, and Carver-Thomas (2016). The authors provided top results for teachers exiting the profession. The highest percentage category was dissatisfaction at 55%, followed by family/personal reasons at 43%, and tied at 31% were to pursue another job and retirement (Sutcher et al., 2016). The percentages do not total 100% as individuals could select multiple reasonings for why they would exit the profession. Deeper analysis of specifics to dissatisfaction

resulted with 25% of those surveyed dissatisfied with recent school accountability measures, 21% dissatisfied with administration, and 21% dissatisfied with teaching as a career (Sutcher et al., 2016). The statistics narrate a story of influence an administrator has on the satisfaction of teachers because a principal is most likely to facilitate accountability measures and influence their staff through leadership measures that can either result in satisfaction or dissatisfaction.

Stages of Teaching

Teachers may experience different levels of satisfaction throughout their career because years of teaching can be viewed in stages and different milestones are often met in each stage (Reitman & Karge, 2019). The more administrators understand those stages the better they can assist teachers with growth and increase the likelihood of staying in the profession (Darling-Hammond et al., 2005). While the number of teaching stages could vary by opinion, Reitman and Karge (2019) used research about teacher development from Fuller and Brown (1975) to categorize teachers' careers in three stages. The first stage is survival. In this initial stage, the teacher is likely led by fear of failure and most concerned with classroom management. During the second stage, the teacher is gaining the ability to critically analyze their practice and manage the multiple duties required. In the final stage, the teacher can focus and reflect on how their practice is influencing student outcomes (Reitman & Karge, 2019). Teachers in this last stage are largely high-quality licensed teachers with effective ratings and minimum of 3 to 7 years in the profession (Shaw & Newton, 2014). However, with 46% of teachers quitting before their 5th year (Eggers & Calegari, 2011), districts are having difficulty with teachers reaching the last stage. Provided with that information, many districts place great focus and research on retaining teachers in their first few years. However, others expressed that a greater focus should be placed

on sustaining the long-serving teachers and focus on the positive reasons teachers stay (Chiong et al., 2017).

It likely does not take someone with experience or first-hand knowledge of the education field to anticipate the characteristics or demographics of schools with the greatest turnover of teachers. Stereotypes may influence the beliefs of a school with high turnover of teachers but unfortunately that mindset may be validated by statistics. High-poverty public schools average around 20% turnover of staff each year (Glickman, 2004) and will lose 50% of teachers on staff every 5 years (Allensworth et al., 2009; Hemphill & Nauer, 2009). Sociodemographic factors also have a relationship to the number of years teachers remain in the profession. Teachers from privileged backgrounds are found to exit the profession at higher rates compared to those from less privileged backgrounds (Arviv-Elyashiv & Navon, 2021). Men are more likely than women to leave the profession, and men and women with advanced degrees leave at higher rates because of more career opportunities (Adi-Raccah, 2005; Dupriez et al., 2016; Struyven & Vanthournout, 2014).

Evidence suggested a teacher with a privileged background may be more financially equipped to make a career change even after investing in their education to become a teacher, while those from less privileged backgrounds may not have the financial support. This may lead one to believe this cycle of teachers leaving the profession is a variation of Charles Darwin's (1869) natural selection and survival of the fittest concept where only those most equipped to adapt with the changes of education will last and be best for students. However, research has inconclusive results that veteran teachers (those in the profession for many years) have a greater impact on student outcomes than their colleagues with less experience (Chiong et al., 2017; Day et al., 2007; Hendricks, 2015). Conversely, there is consensus that a teacher's productivity

increases with more experience in the classroom (Hendricks, 2015; Miulescu, 2020; Rivkin et al., 2005). The reasons to stay committed to the profession paired with the stages of teaching demonstrate the complexities of the career and factors that may lead teachers to be satisfied or motivated to leave.

Education Policy and Teaching Licensure Changes

As attrition became more noticeable in the media and with legislators, nationwide policy changes began to take place to ease the teacher credentialing and licensing process (Sutcher et al., 2016). This opened doors to available human capital but is often a sign of a teacher shortage because the level of highly qualified teachers is not available (Sutcher et al., 2019). None-the-less, the goal of the change is to attract and retain new educators to the profession. As of 2015–2016, nearly 20% of public school teachers had entered the teaching profession through an alternative certification program (NCES, 2018a), which was an increase of 3.4% from 4 years prior (McPherson, n.d.). While an increased job market with occupation options looks attractive to the public and is being filled by educated professionals, the education sector is deflating and losing the battle to maintain appropriately licensed teachers (PELSB, 2023). However, during the COVID-19 pandemic and unpredictable labor market, teachers' attrition slowed as uncertainty in the workforce loomed (Goldhaber & Theobald, 2022).

The increase of teachers from alternative pathways is a sign of recruitment success, but there is also a growing concern about the programs and preparations colleges and universities are implementing to attract and sustain people in the education profession (NCES, 2018a; Zugelder, 2021). Shortages of teachers are specifically regarding credentialed (licensed) teachers (Garcia & Weiss, 2019), and states recognizing this dilemma implement their own requirements to attract bachelor's degree earning graduates to the profession, though further requirements differ from

state to state. While states vary in particulars, a credentialed teacher has: completed a bachelor's degree from an accredited college or university, completed the credentialed teacher preparation program, and passed the academic knowledge tests set by their state.

The Minnesota Professional Educator Licensing Standards Board (PELSB) oversees the licensing and certification for teachers, including those with alternate paths and certifications. Minnesota's minimum requirement for eligibility of earning an alternative teacher certification is a bachelor's degree. A bachelor's degree is valid for all subjects other than Career and Technical Education or Career Pathways Course of Study, unless meeting specific exemption requirements (Education Minnesota, 2023). Minnesota initiated a tiered licensure system on July 1, 2018. The tiered system was implemented to help identify the qualifications for various teaching positions. While supportive to attract educated professionals to the teaching profession, those entering with only a bachelor's degree are at a Tier 1 appointment, the lowest of the four tiers. A Tier 1 license is only valid for 1 year but can be renewed three times. As of 2023, a Tier 1 professional is part of the collective bargaining unit but does not earn credit towards probation and does not have continuing contract rights (Education Minnesota, 2023). A Tier 1 license holder can only receive the position if the district can verify there were no other qualified professionals holding a Tier 2, 3, or 4 license (Education Minnesota, 2023).

Tier 2 educators hold a bachelor's degree and are enrolled in a teacher preparation program, have a master's degree in the content they are teaching, or must meet two other qualifications established by the Minnesota Professional Educator Licensing Standards Board (Education Minnesota, 2023). Tier 2 educators may maintain their position for 2 years and be renewed up to three times. Like Tier 1, Tier 2 educators have the added benefit of being part of the teacher bargaining unit but do not have continuing contract rights (Education Minnesota,

2023). However, successful completion of requirements from a Tier 2 to a Tier 3 license includes the added benefits of counting 2 years of teaching towards the 3-year probationary period (Education Minnesota, 2023).

Tier 3 and Tier 4 are the licensure requirements most common of the general publics' knowledge of a practicing teacher. Teachers with a Tier 3 or 4 license have a bachelor's degree and have completed a teacher preparation program. Tier 3 licenses are good for 3 years and can be renewed indefinitely (Education Minnesota, 2023). Teachers with a Tier 3 license have a 3-year probationary period and then earn continuing contract rights and during that time they are part of the collective bargaining unit (Education Minnesota, 2023). A Tier 4 qualification is considered a highly qualified teacher because they have achieved all Tier 3 qualifications and, in addition, have 3 years of teaching experience, and their most recent evaluation has not resulted in an improvement plan (Education Minnesota, n.d.-b). Appendix B is supportive of understanding all requirements and stipulations. The tiered system demonstrates Minnesota acknowledges the need to recruit educated professionals from other professions and provides a path of support as aspiring educators embark on a new field. The tiers also recognize those continuing to obtain their teaching degree through credentialed systems by having more options of assignment and benefits than those on a Tier 1 or Tier 2 licensure.

Minnesota has a healthy 96.8% of teachers with a Tier 3 or Tier 4 professional license (PELSB, 2021). This demonstrates that most Minnesota public school classrooms have a professionally licensed educator. However, from 2016–2017 to 2019-2020, the number of 1st-year teachers entering the profession decreased from 3,107 to 1,964 (PELSB, 2021). Over a 5-year period from 2015 to 2020, the 1st-year teachers' attrition rate in Minnesota was 11%, then 17% after the first 2 years, and 22.5% after their first 3 years (PELSB, 2021). This sharp decline

of new teachers entering and staying in the profession demonstrates the difficulty of sustaining teachers and replacing those leaving the profession.

A Principal's Influence on Teachers' Job Satisfaction

The plethora of research pinpoints various areas of focus to increase job satisfaction (e.g., salary, opportunities, promotions, accomplishments, recognition and appraisal, empowerment, behavior, decision-making involvement, resilience, climate and culture, support, and mentorship) (Arnup & Bowles, 2016; Ford et al., 2018; Ingersoll, 2001; Locke, 1969). Principals have tremendous influence through their leadership traits in the daily satisfaction and yearly turnover of teachers. The constructive leadership characteristics of school principals are positively associated with teachers' job satisfaction and commitment to the profession (Inandi et al., 2022; Liu, 2005; Mattingly, 2007). Teachers have higher job satisfaction when principals include the teaching staff in school-wide decision-making, when principals support teachers throughout their development, and when principals are part of professional development to build upon their leadership growth (Boyd et al., 2011; Inandi et al., 2022). Transparency from principals to teachers can improve working conditions in such a manner that teachers begin to feel loyalty and commitment to their school, colleagues, and the profession (McIntyre, 2010). Loyalty and commitment are often tied to the culture of an organization and suggest the strongest influence to combat attrition is a positive school culture (Ingersoll & Smith, 2003; Kukla-Acevedo, 2009).

Principals and other school leaders with the understanding of empowering teachers through modeling of desired outcomes and behaviors have resulted in an association of a higher level of teacher performance, job satisfaction, and reduced resistance (Vecchio et al., 2010). Principals can create an environment of support and understanding when clearly communicating the kind of school they want. Supportive environments improve the schools' culture and

teachers' resilience in difficult times, which will likely maintain teachers in the profession (Arnup & Bowles, 2016; Johnson et al., 2010). Resilience is not a born characteristic but developed through personal experiences, people's environment, and their support system (Arnup & Bowles, 2016; Gu & Day, 2007; Mansfield et al., 2012). This is especially true for new to profession staff members as they are statistically highest to leave the profession when not receiving mentorship from veteran teachers or their administrative staff (Arnup & Bowles, 2016; Buchanan, 2012; Haynes, 2014; Stockard & Lehman, 2004). Twenty-two and a half percent of Minnesota teachers in their first 3 years leave the profession (PELSB, 2021), leaving nearly one-fourth of a teaching staff being new to each school every few years.

A recently researched variable of job satisfaction is the relationship between the principal and their teachers. Investigations between the leadership style of a principal paired with their decision making and its effect on teacher satisfaction is not groundbreaking, but it is newer research to identify the perception of the teachers regarding their occupation (Bogler, 2001). It has been determined supportive and approachable principals positively influence teachers' job satisfaction (Aldridge & Fraser, 2016; Frahm & Cianca, 2021; Tarek et al., 2015), and when studying workplace conditions, administrative support had the most predictive measure for teachers' attrition (Carver-Thomas & Darling-Hammond, 2019). Demonstrating the interpersonal connections between teachers and principals may have a stronger influence on attrition than operational aspects of the education system.

Competent interpersonal communication from principal to teacher has consistent findings of positive job satisfaction (Inandi et al., 2022; Rachmawati & Suyatno, 2021). Communication can be present in a variety of forms, but teachers want the support a principal is willing to offer to lighten the workload and improve teaching (Boyd et al., 2011). Still, difficulty may lie with a

principal unknowing of their leadership and communication style, therefore leaving belief their communication skills are sound. Equally a possibility, the traditional role of principal has transitioned from daily operations and managing student behavior to being the instructional leader, building climate and visionary setter, working the budget, and assigning staffing. This may lead to a stronger skillset or greater priority in an area other than being a sound communicator (Frahm & Cianca, 2021; Mendels & Mitgang, 2013; Pannell et al., 2015).

Communication is transferring information from one person to another. Yet this process is far more complex when including many individuals within an intricate system and assessed on individual state's standards. The heaviness of wanting and needing to perform to desired outcomes can add stress to those involved within the organization. Fortunately, administrators can alleviate the stress and improve the workplace because 70% of an organization's culture is determined by them (Çaybaş & Ordu, 2022). Sustaining or improving culture happens when all individuals understand and utilize ideal forms of communication. Listening with respect and empathy, speaking with humility, understanding verbal and non-verbal cues, and actively working toward mutual relationship respect will improve the satisfaction of the work environment (Çaybaş & Ordu, 2022). Principals unknowing or lacking the previously listed communication skills will experience great difficulty with developing a culture of satisfied teachers.

Principal leadership styles are often categorized as autocratic, democratic, or laissez-faire (Kars & Inandi, 2018). Democratic leadership is viewed as the most favorable style because of the positive effect on organizational trust, while autocratic and laissez-faire have a negative relationship. Democratic leadership has the greatest relationship with teacher trust because of the shared decision-making process, structured and open collaboration, and all input from teachers is

viewed as valuable (Northouse, 2012). When principals utilize those democratic leadership qualities, they will notice an increase in motivation, satisfaction, and commitment to the school (Northouse, 2012). The foundational beginnings of job satisfaction and organizational commitment are set up and must be communicated by the principal because a consistent and understandable message regarding the kind of school they want is more likely to increase job satisfaction (Dou et al., 2017; Hallinger, 2003; Nguni et al., 2006).

Common identifiable factors of positive school culture and climate are when teachers express their administrator includes them in the decision-making process, seeks their input, and feels supportive through open lines of communication (Shepherd-Jones & Salisbury-Glennon, 2018). Those factors are signs of a highly effective leader because their communication skills are a tool for influence and inclusiveness without the fear of judgment (Lawson et al., 2017; Mull, 2020). Strongly formed relationships between the principal and teachers, along with higher student achievement, are the results of highly effective communication from leaders (Marzano et al., 2005; Supovitz et al., 2010). Students' achievement and its correlation with principals' communication skills are agreed upon by a large body of work, but there is still a need to determine the specific communication skills necessary to increase teachers' job satisfaction (Anchor, 2010; Muchinsky, 1977; Mull, 2020; Neves & Eisenberger, 2012; O'Reilly & Roberts, 1977; Snyder & Morris, 1984).

Principals' Communication for School Mission and Vision

A principal communicating the kind of school they want is often referred to as the mission and vision of the school. A school's mission is commonly describing the purpose and commitments that describe the work they wish to accomplish. Teacher work and job satisfaction appear to be dependent on the education mission (Bogler, 2001). A recommended

communication practice for principals is to express the vision of the school because visionary leadership has proven a greater strategy than administrative authority or laissez-faire approaches (Chen & Yuan, 2021). Visionary leadership was introduced in education around the 1990s when Powe (1992) described visionary leadership as a means to accomplish educational missions. Truth can still be dissected from that simple statement, but mission and vision leadership from the principal has been continuing to adapt and transform. Organizations outside of the education sector have been using similar terminology such as commitments, purpose, values, and goals to develop an alignment of understanding between all members of the organization to increase productivity and decrease misunderstanding or conflict (Bryson, 2004; Gurley et al., 2015; Kaufman, 1992; Mintzberg, 1994).

The goal of creating objective statements is to have a common purpose and desired outcome with all employees understanding how to obtain the objectives. While variations of mission and vision have occurred in schools for decades, most focus on specific strategies to increase student academic performance (DuFour et al., 2008; Gurley et al., 2015; Wiggins & McTighe, 2007). Student academic performance is still a contributing factor, but more modern approaches to mission and vision are described with the principal identifying their own vision and adjusting or refining with their staff (Heath & Heath, 2010). More commonly suggested, schools develop the vision together and include policies, beliefs, and principles as this collaborative approach creates a greater sense of purpose and priority among all stakeholders (Taylor et al., 2014). However, simply creating and delivering the message is not sufficient. Many aspiring educational leaders lack the skills nor have been exposed to properly developing the mission and vision of a school (Gurley et al., 2015). The lack of understanding results in the

creation and implementation of the mission and vision being shared once, rather than becoming the foundation of the school and frequently referenced and assessed.

Mission and vision should operate as a cycle with the following principles: (a) the principal must understand the internal and external school environments, (b) the principal must include their own vision, (c) the principal must clearly communicate the vision with all school members, (d) the vision must include the beliefs and values of all school members, and (e) the principal must develop a system that can provide continuous feedback and encourages all school members to lead (Chen & Yuan, 2021). When developed, principals must communicate the mission and vision on a daily basis. This increases dialogue opportunities with teachers to discuss instruction and provide in-the-moment feedback to adjust and improve performance (Bamburg & Andrews, 1991; Mendels, 2012). The aforementioned principles demonstrate the mission and vision are built and carried out by the same members, which will be evident to internal and external stakeholders.

There is consensus among researchers how the development of mission and vision is a fluid process and can be used as "building blocks" on the route to success because of the complexities within the education environment (Danielson, 2007; DuFour et al. 2008; Fullan 1993; Marzano et al. 2005; Reeves, 2000). Principals have the responsibility for the continuation of inclusiveness and collaboration between stakeholders so the positive climate and teaching environment continues to be of high quality (Mull, 2020). This will require principals to dedicate time and space to review and carry out the mission and vision with all involved individuals so the process does not get lost with other daily requirements. However, Bass and Avolio (1990), through Bass's (1985) Multifactor Leadership Questionnaire, indicated it takes a principal with

charisma and inspiration to spark the attention and provide a personal considerate touch of transformational leadership to get followers on board with the mission and vision (Bogler, 2001).

Transformational Leadership Theory

Principals influence the job satisfaction of teachers and can contribute positively by the leadership style they practice. Transformational leadership can be traced to political scientist Downton (1973), but it was not until Burns (1978) made the distinction between transformational and transactional leadership that a more complete definition and examples were offered. Other researchers (Bass, 1985; Bass & Avolio, 1990) began to develop theories and models with the inclusion of the laissez-faire leadership style, all of which are part of the full range leadership theory. Each leadership style within the full range leadership theory is deserving of its own research and has connections to multiple disciplines, but transformational leadership theory, developed by Bass and further refined by Bass and Avolio, is most conducive to principals' communication and influence on teachers' job satisfaction.

Transformational leadership focuses on inspiring people within the organization through "idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration" (Hooijberg & Lane, 2013, p. 896), while transactional leadership occurs through transactional exchanges in the form of rewards and punishments to instill ideal behaviors from leaders to their followers (Hooijberg & Lane, 2013). The laissez-faire leadership style is controversial among leadership researchers and is argued to not be categorized as a leadership style because it is often defined as avoiding leadership tasks and not exhibiting effective leadership (Hooijberg & Lane, 2013; Yukl, 2010). Nonetheless, those in leadership positions conducting their staff with the laissez-faire approach have qualified as a "style" of leadership

because it can produce a different outcome and culture when compared to leaders utilizing a different approach.

Job satisfaction is positively related to transformational leadership and shared decision-making opportunities (Bogler, 2001; Rossmiller, 1992). The four roles of transformational leadership--idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration--are positively related to follower satisfaction and organizational effectiveness (Hooijberg & Lane, 2013). Each role details and serves an individualized purpose from the other yet must work in conjunction to attain the desired results.

Idealized influence leaders serve as a role model with high ethical standards and think about the needs of others to build trust and respect so shared delegated tasks can be completed by followers (Hooijberg & Lane, 2013; Moss & Ritossa, 2007). Inspirational motivation leaders provide inspirational and motivational work to their followers (Bass at al., 2003) while remaining an enthusiastic future-driven figure delivering a futuristic vision through optimism (Antonakis et al., 2003; Hooijberg & Lane, 2013). Intellectual stimulation leaders create an environment of problem solving through innovative solutions (Limsila & Ogunlana, 2008) while handling difficult situations with followers in a private manner to further promote innovation at the expense of risk taking (Hooijberg & Lane, 2013; Moss & Ritossa, 2007). Lastly, individualized consideration leaders have a solid understanding of the individual areas of strength and growth of their followers and will support them through mentorship while also being considerate of assigning tasks fitting their skillset (Bass et al., 2003; Bass & Avolio, 1994; Hooijberg & Lane, 2013; Sadeghi & Pihie, 2012).

Transformational leadership can be applied to multiple leadership positions across various professions, but the focus will remain on the impact of teachers' job satisfaction. There

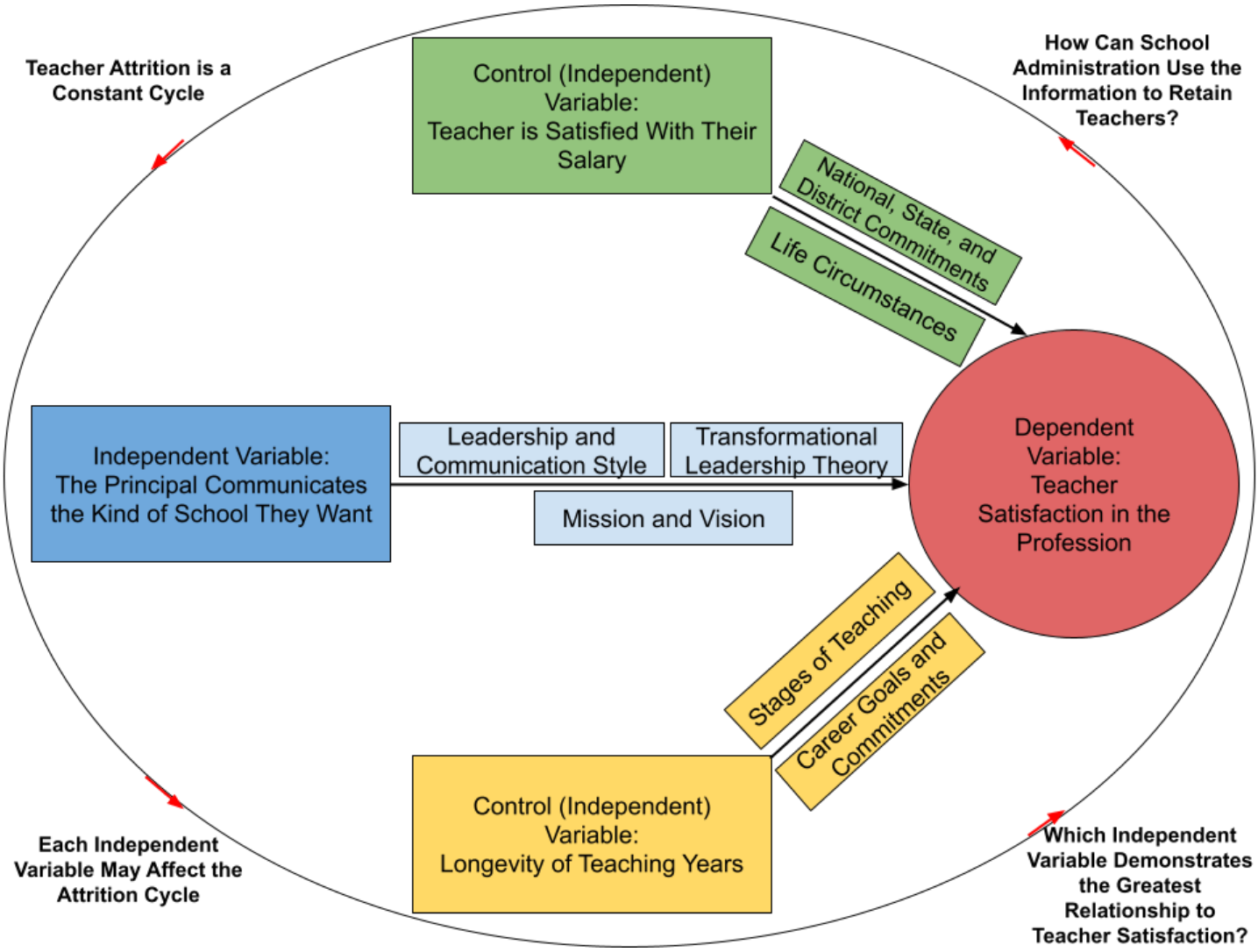
are countless resources and research addressing various leadership styles, characteristics, and qualities that strive to identify which are the most effective to utilize within organizations. Leadership style research in the educational field pertaining to principals is no different as there are extensive resources available. However, results are conflicting whether a principal's leadership influences teacher performance or satisfaction with their job (Firmansyah et al., 2022). Although, perceived teacher satisfaction by teachers is directly related to transformational leadership (Avolio et al., 1999; Firmansyah et al., 2022). Being a transformational leader is perceived by teachers as a highly effective leader and it is recommended school leaders assess their leadership style and begin to build a positive environment and culture through organizational involvement, trust with teachers, and developing a shared vision (Leithwood & Jantzi, 2000).

Conceptual Framework

The framework signifies attrition will always be a cycle as evidenced by the 8% of teachers leaving the profession every year. The significance of the relationship between the independent variables and the dependent variable has multiple factors leading to teacher satisfaction. The independent variables and factors can also lead to attrition and therefore the data collected on the variables and factors will lead to a conclusion of recommendations for principals to retain teachers. The identified variables and factors may lead to the determination of which independent variable will have the greatest significance on teacher satisfaction. Thus, providing insight to school principals on how to slow the cycle of attrition.

Figure 1

Cycle of Teachers' Attrition



Note. Conceptual framework of the relationship the three independent variables have on teacher satisfaction. All independent variables have multiple factors that may contribute to attrition or are reasons teachers choose to stay in the profession.

Conclusion

The information and research presented in this chapter provided initial evidence about the potential relationship between teachers' job satisfaction and a teachers' satisfaction with their salary, teachers' duration in the profession, and principals' influence on teachers' job satisfaction through the communication about the kind of school they want. Understanding details of the potential relationship will assist with the comprehension of results and determination of next steps that could be developed and shared to slow the teachers' attrition rate.

Chapter 3: Methodology

Purpose of the Study

The purpose of this study was to determine if there were statistically significant ($p < .05$) relationships between the independent variables of Minnesota public school teachers' perception that their principal(s) communicate the kind of school they want, salary satisfaction, length of time working in the profession, and the dependent variable of teachers' job satisfaction. This quantitative study used pre-existing data from the 2020–2021 National Teacher and Principal Survey (NTPS) provided by the National Center for Education Statistics (NCES) to determine the significance of Minnesota public school teachers' job satisfaction in relation to the three previously listed independent variables. The correlations were tested using a binary logistic regression.

Research Question

Are there statistically significant ($p < .05$) relationships between the independent variables of Minnesota public school teachers' perception that their principal(s) communicate the kind of school they want, salary satisfaction, length of time working in the profession, and the dependent variable of teachers' job satisfaction?

Null Hypothesis

There are no statistically significant ($p > .05$) relationships between the independent variables of Minnesota public school teachers' perception that their principal(s) communicate the kind of school they want, salary satisfaction, length of time working in the profession, and the dependent variable of teachers' job satisfaction.

Alternative Hypothesis

There are statistically significant ($p < .05$) relationships between the independent variables of Minnesota public school teachers' perception that their principal(s) communicate the kind of school they want, salary satisfaction, length of time working in the profession, and the dependent variable of teachers' job satisfaction.

Researcher's Positionality

The researcher is a Tier 4 licensed teacher and licensed K–12 principal in Minnesota. Having taught 4 years as an elementary classroom teacher, 4 years as a science, technology, engineering, and math (STEM) integrationist, 1 year as a dean of students, and currently beginning the 4th year as a secondary school assistant principal, the noticeable teachers' attrition rate is of high interest to the researcher. Common themes were presented in conversations of teachers expressing their need for higher pay, continuing contract teachers fearful that leaving would jeopardize their retirement progress, and teachers electing to either stay or leave because of the building principal. Experiencing and understanding the low teaching salary in comparison to other degree earning professionals, being in the profession long enough to understand the risks of loss of benefits and retirement, and the importance of communication as a principal, the researcher wished to best support those in their immediate surroundings and others across the country.

Research Design

The path of design was a non-experimental quantitative study using descriptive data collected through a survey. The goal was to identify whether there are statistically significant relationships between the dependent variable of teachers' job satisfaction, and the independent variables of teachers' satisfaction with their salary, the number of years teaching, and

perceptions that their principals communicate the kind of school they want. This study used data from the 2020–2021 National Teacher and Principal Survey (NTPS) administered by the U.S. Department of Education. The National Center for Education Statistics (NCES) is the federal entity for collecting and analyzing this data and is available to the public.

Data Collection

The researcher gained access to this information by creating an account with DataLab, a platform of web-based tools provided to the public with access to data collected by the NCES. Each new user must agree to the terms set by DataLab which are to use the data for statistical purposes only, make no use of the identity of any person or institution discovered inadvertently, and not link any dataset with individually identifiable data from other NCES or non-NCES datasets (NCES, n.d.-a).

The 2020–21 NTPS data collection was conducted during the coronavirus pandemic, which affected school operations starting in March 2020 (Taie & Lewis, 2022). The 2020–21 NTPS utilized a multitude of data collection processes. The opportunities to collect data involved mail and internet surveys. To gain more responses, representatives followed with telephone, mail, and email communication. Data were collected via the Teacher Listing Form, the Principal Questionnaire, the School Questionnaire, and the Teacher Questionnaire (Taie & Lewis, 2022).

Instrument

The NTPS survey (Appendix A) is based upon a Congressional mandate to collect, collate, analyze, and report complete statistics on the condition of American education; conduct and publish reports; and review and report on education activities internationally (NCES, n.d.-b). Regarding education, the NTPS is the primary descriptive data collection database in the United States providing information on the current affairs of the education system. The questionnaires

are designed to be understandable to their purpose and maintain this by undergoing cognitive and usability testing (NCES, n.d.-c). This study used public school teacher data from the 2020–2021 NTPS to determine if there were statistically significant relationships between the independent variables of Minnesota public school teachers' perception that their principal(s) communicate the kind of school they want, salary satisfaction, length of time working in the profession, and the dependent variable of teachers' job satisfaction. Therefore, input from public school principals is not necessary.

The researcher utilized existing data from the NCES; therefore, the researcher was able to collect and analyze from the setting of their choice. The NTPS is conducted by the NCES of the Institute of Education Sciences (IES) within the U.S. Department of Education and data are collected by the United States Census Bureau (Taie & Lewis, 2022). The NTPS is a sample survey of public and private K–12 schools, principals, and teachers in the 50 states and the District of Columbia (NCES, n.d.-c; Taie & Lewis, 2022). Other United States jurisdictions were excluded, as well as the Department of Defense overseas schools, and Common Core of Data schools that did not offer teacher-provided classroom instruction in Grades 1–12 or the ungraded equivalent (NCES, n.d.-c).

All of the Bureau of Indian Education-funded (BIE) schools are eligible for NTPS, but those schools were not oversampled, and the data collected did not support separate BIE estimates (NCES, n.d.-c). The NTPS was designed to produce national, regional, and state estimates for public elementary and secondary schools, principals, and teachers, including public charter schools and the principals and teachers within them. The 2020–2021 NTPS was previously conducted three times and is the successor to the Schools and Staffing Survey

(SASS), which was conducted seven times prior with the first in 1987-88 (NCES, n.d.-c; Taie & Lewis, 2022).

Sample

The 2020–2021 NTPS was a nationally distributed questionnaire for licensed public (traditional and charter) and private school teachers and principals. About 9,900 public schools and their principals and about 68,300 teachers were sampled (NCES, n.d.-c). The NTPS defined a teacher as any staff member teaching a regularly scheduled class to students in grades K–12 with those teachers being the desired participants for the survey (Taie & Lewis, 2022). Strategies to obtain Teacher Listing Forms (teacher rosters) of qualifying teacher participants were completed by contacting sampled schools using mail, email, online directories, and purchasing teacher rosters from third party vendors (Taie & Lewis, 2022). The Census Bureau set the limit of the overall number of teachers selected with the maximum of 20 participants per school to avoid over sampling (Taie & Lewis, 2022). Four to 10 teachers were the average range of participants per public school at the conclusion of the survey (Taie & Lewis, 2022).

An advance letter was mailed to sampled schools to verify eligibility and schools were asked to verify information from a mailed package and determine an available survey coordinator to follow up with the Census. Calls from the Census occurred with schools not returning information. If necessary, sampled teachers were called from the telephone centers in an attempt to complete the questionnaire over the phone (NCES, n.d.-a). The 2020–2021 NTPS used multiple media of data collection of teacher responses to the questionnaire including mail, electronic mail (e-mail), internet reporting, and telephone throughout the months of November 2020 to April 2021 (NCES, n.d.-c).

Public and private schools received three surveys. The public school surveys were Principal Questionnaire, School Questionnaire, and Teacher Questionnaire. The private school surveys were Private School Principal Questionnaire, Private School Questionnaire, and Private School Teacher Questionnaire (NCES, 2021). The sample was not designed to produce state-level estimates, though information can be filtered down by state participants. In addition, the sample can be divided into four categories: primary, middle, high, and combined schools. For the purpose of this study, categories were combined to include only licensed public school teachers from any level of teaching and filtered to responses from Minnesota public school teachers.

The importance of using Minnesota public school teachers is for the researcher to understand the data from teachers within their home state and potential solutions to improve teachers' job satisfaction. States have their own educational laws that likely influence job satisfaction. Out of all the states, the researchers has the greatest knowledge of Minnesota's educational laws, which helped the researcher interpret the survey's results and ponder attrition solutions.

The total weighted number of completed surveys of Minnesota public school teachers in primary, middle, and high school education was 82,235. According to the NCES (n.d.-b), weighting the responses on the NTPS serves the purposes of taking into account the schools' selection probability, reducing biases which may result from unit nonresponse and making use of available information from external sources to improve the precision of sample estimates. See Table 1 for information on how to calculate response rates and the nationally weighted calculations.

Table 1

Weighted Sample Response Rates

Table 1 (continued)

Survey	Unit Response Rate (%)	Overall Response Rate (%)
Public School Questionnaire	65.6	†
Public School Principal	71.8	†
Public School Teacher Listing Form	88.2	†
Public School Teacher Questionnaire	62.4	55.0

Note. Response rates were weighted using the inverse of the probability of selection (initial base weight), † = not applicable. Adapted from *Public School, Public School Principal, and Public School Teacher Documentation Data Files, 2020–21*, by U.S. Department of Education, National Center for Education Statistics, National Teacher and Principal Survey (NTPS), 2021.

Weighted response rates are defined as the number of in-scope responding questionnaires divided by the number of in-scope sampled cases, using the base weight (inverse of the probability of selection) of the record. There were two sampling stages for teachers: first, the school–level collection of the Teacher Listing Form from sampled schools, and then the sampling of teachers from the Teacher Listing Form. When both stages are multiplied together, the product is the overall weighted response rate (NCES, n.d.-b)

Measures

Dependent Variable

The dependent variable question from the 2020–2021 NTPS was: T1729: "I am generally satisfied with being a teacher at this school." Respondents had four options of selection for their choice to this question: (a) strongly disagree, (b) somewhat disagree, (c) somewhat agree, or (d) strongly agree. For the purpose of this study, and due to limitations with DataLab, the variable was dichotomized as disagree and agree.

Independent Variables

The independent variable questions were T1714: "I am satisfied with my teaching salary," and T1722: "The principal knows what kind of school he or she wants and has

communicated it to the staff." Respondents had four options of selection for their choice to this question: (a) strongly disagree, (b) somewhat disagree, (c) somewhat agree, or (d) strongly agree. For the purpose of this study, and due to limitations with DataLab, the variable was dichotomized as disagree and agree.

The respondents wrote in the number of years for the other independent variable question T0110: "Excluding time spent on maternity/paternity leave or sabbatical, how many school years have you worked, either full-time or part-time, as a K–12 or comparable ungraded level teacher in public, public charter, or private schools?" Using PowerStats within DataLab, responses to questions T1729, T1714, and T1722 recorded as "Strongly Disagree" or "Somewhat Disagree" were categorized as "Disagree" and responses recorded as "Somewhat Agree" and "Strongly Agree" were recategorized as "Agree." The number of years teaching for question T0110 was retained as a continuous variable.

Reliability and Validity

The NTPS, like other surveys, is subject to sampling and nonsampling errors. Data collected from a sample of the population rather than the entire population can result in sampling errors, but estimates of the magnitude in the sampling error can be derived or calculated for the NTPS (Taie & Lewis, 2022, p. B–21). Nonsampling errors are attributed to multiple factors. Those factors include definitional difficulties, unwilling or unable to provide correct information by the respondents, interpretation of question differences, inability to recall information, collection errors, data processing errors, and errors in estimating values for missing data (Taie & Lewis, 2022).

The Statistical Standards Program is another quality assuring measure utilized by the NCES to overview their process of reliability and validity. The Statistical Standards Program

provides support to the NCES and other federal and nonfederal organizations that participate in statistical work that aligns to the mission of NCES. Developing standards to ensure quality of statistical products and analyses, along with consulting and advising standards for projects are another aspect of the Statistical Standards Program procedures. The coordination and review for the final judgment of publication for the NCES and further review and revision of standards are of important focus of the Statistical Standards Program. Additionally, the Statistical Standards Program monitors and administers procedures to maintain confidentiality and oversees restricted-use data licenses for NCES products. Participating in long-term methodological and statistical research projects to consult and advise helps the Statistical Standards Program stay current on emerging statistical issues (NCES, n.d.-d).

Data Analysis

Without the need of identifiable information, DataLab was the recommended platform by NCES to analyze data from the NTPS. The requirement by NCES is to create a user profile with DataLab and agree to the terms of using the data for statistical purposes only and not to attempt the identification of participants. Analysis of the data is available within the online NCES website using DataLab. Within DataLab are PowerStats and the Tables Library. PowerStats provides access to many datasets and allows the user to calculate statistics to interpret their own studies. The Tables Library provides publicly available educational data sets, which are available for the user to search for topics or sources of interest (NCES, n.d.-a). DataLab, PowerStats, and the Tables Library were used to locate the NTPS survey and search for the specific questions (variables) in the survey. The results assisted with the determination if there are statistically significant relationships between the independent variables of Minnesota public school teachers' perception that their principal(s) communicate the kind of school they

want, salary satisfaction, length of time working in the profession, and the dependent variable of teachers' job satisfaction.

Binary Logistic Regression

Binary logistic regression must be used in the analysis because the outcome variable (dependent) is dichotomous (Kunene & Toskin, 2022). Logistic regression is used to predict the probability of a specific value by using a supervised classification algorithm (Edgar & Manz, 2017; Kunene & Toskin, 2022). Logistic regression uses binary outcomes by placing values in two categories; in this case, teachers' responses that they strongly/somewhat disagree and strongly/somewhat agree to an item related to their overall teaching satisfaction (Edgar & Manz, 2017). The researcher used an alpha value of $p > .05$ to reject the null hypothesis. The logistic regression calculates the association between the dependent variable and the multiple independent variables.

The researcher tested assumptions of the logistic regression. Those assumptions include that there should be little or no multicollinearity between the independent variables, meaning that the three independent variables should have bivariate correlations below $r = .5$ and none of the variance inflation factors should be above 10.0 (Field et al., 2012). Another assumption is that the independent variables are linearly related to the log odds, which the researcher tested by visually inspecting the scatterplots between each independent variable and logit value (Field et al., 2012). The researcher ran additional diagnostics to assess the model, including likelihood ratios, defined as the probability of observing the outcome given the input data and the model (NCES, n.d.-a), and pseudo R^2 values, defined as the measure of how well a model fits the data. A perfect fit would have an R^2 of 1. A pseudo R^2 helps compare multiple models to the same data

set (NCES, n.d.-a). Finally, the researcher computed the beta coefficients, Wald statistics, odds ratios, 95% confidence intervals for the odds ratios, and *p*-values via one logistic regression.

Limitations/Delimitations

The 2020–2021 NTPS was delivered to all K–12 public and private school teachers across the United States of America, but the researcher chose to limit the participants to Minnesota public school teachers (the researcher's state of licensure and employment). The participant sample is robust with a weighted sample of 82,235 public school teachers from Minnesota. However, limiting the data to one state may not represent national data trends. The sample set is currently the most recent during the analysis of this paper but may not be when completed as the Census has begun to contact schools in preparation for the 2023-2024 questionnaires.

School operations were impacted by the COVID-19 pandemic, so responses from participants may have been influenced by factors that no other surveys had to consider. However, there were questions regarding school responses to the pandemic. Many variables could be considered from the survey, but the researcher chose the particular variables as they are commonly discussed or argued and could benefit from further research and comparison. Not comparing all potential variables from the 2020–2021 NTPS suggests there may be a variable that demonstrates a greater relationship to teachers' job satisfaction than the three variables chosen. The variables will not and do not directly measure attrition.

It is not possible to know how principals communicated their vision, how often, or if the message was received or understood by the surveyed participants. Single items used for dependent variables can be limited while multiple items used in a factor can provide a more holistic measure of a phenomenon like "satisfaction," which is multidimensional. The researcher

progressed from the delimitations by using current research and a smaller sample to provide a current viewpoint on the issues of teachers' job satisfaction. The item measuring teachers' perceptions of principals' communication is limited. Therefore, conclusions will be drawn from the data.

Ethical Considerations

Data for this research did not require a license application and approval from the standard application process portal within the NCES DataLab. The NCES and the Department of Education abide by the National Education Statistics Act of 1994, as amended, the Privacy Act of 1974, the Computer Security Act of 1987, and the Education Sciences Reform Act of 2002 (NCES, n.d.-b). The Census Bureau staff removes names, addresses, and other identifying information for schools, principals, and teachers to protect respondents' confidentiality. Only users who have official clearance from NCES may have access to data files allowing analysts to connect sampled schools, teachers, or principals to the school districts with which they are associated. The researcher only accessed the de-identified, weighted data for analyses.

The researcher is a Bethel University graduate student and successfully completed the Collaborative Institutional Training Initiative (CITI) certification training. Within said training was detailed information regarding the Belmont Report. The researcher fully abided by the principles and common rule of the Belmont report by: (a) respecting all persons contributing to the survey by honoring their anonymity, (b) reducing any potential harm and doing what is able to demonstrate kindness to the surveyed participants, (c) abiding by the regulations administered by the NCES, and (d) submitted approval to Bethel University's Institutional Review Board (IRB) for approval of the use of data and continuously monitored the operations as instructed by

the IRB. In addition, the researcher expanded further understanding of ethical considerations through participation in lectures and coursework.

Chapter 4: Results

The purpose of this study was to determine if there were statistically significant ($p < .05$) relationships between the independent variables of Minnesota public school teachers' perception that their principal(s) communicate the kind of school they want, salary satisfaction, length of time working in the profession, and the dependent variable of teachers' job satisfaction. Chapter 3 provided the design of the study and measures of the data to determine if there is a relationship. This chapter will supply data that support the understanding of the demographics of participants and the results of the relationship between the dependent variable and independent variables.

Research Question

Are there statistically significant ($p < .05$) relationships between the independent variables of Minnesota public school teachers' perception that their principal(s) communicate the kind of school they want, salary satisfaction, length of time working in the profession, and the dependent variable of teachers' job satisfaction?

Null Hypothesis

There are no statistically significant ($p > .05$) relationships between the independent variables of Minnesota public school teachers' perception that their principal(s) communicate the kind of school they want, salary satisfaction, length of time working in the profession, and the dependent variable of teachers' job satisfaction.

Alternative Hypothesis

There are statistically significant ($p < .05$) relationships between the independent variables of Minnesota public school teachers' perception that their principal(s) communicate the kind of school they want, salary satisfaction, length of time working in the profession, and the dependent variable of teachers' job satisfaction.

Population Locale Code and Teachers' Demographics

Tables 2 through 7 provided demographic information about Minnesota teachers, their assignment, and the students and community they served, which assist with an understanding of who the teachers were when responding to the 2020–2021 NTPS.

The National Center for Education Statistics' Education Demographic and Geographic Estimates (EDGE) program classifies communities into twelve locales ranging from large cities to remote rural areas. The four major locales of city, suburb, town, and rural each have three subcategories. Table 2 provides information about each major locale that was assigned by the city and zip code identified by the participant.

Table 2

Minnesota Collapsed School Locale Code

	n	*%*
City	20543	24.98
Suburb	24957	30.35
Town	17715	21.54
Rural	19020	23.13
Weighted Total	82235	100

Table 3 provides results to a demographic question from the 2020–2021 NTPS survey requesting participants to identify whether they are male or female. The results were limited to Minnesota teachers, which indicated 71.3% of the respondents selected female and 28.7% of the respondents selected male. The total weighted number of respondents was 82,234.

Table 3

Demographic Characteristics for Sample

	N	*%*
Male	23633	28.7
Female	58601	71.3
Weighted Total	82234	100

Participants were requested to identify their race or multiple races, which is provided in Table 4. The Minnesota teacher population was primarily White at 93.93%. Asian teachers were represented at 1.97%, Hispanic teachers at 1.96%, and American Indian teachers at 0.94%. The two lowest indicated races were multi-racial at 0.55% and Black at 0.50%. The reporting standards were not met to provide a percentage for Hawaii Native.

Table 4

Minnesota Teachers' Race

	n	*%*
Hispanic	1615	1.96
Multi-Racial	451	0.55
American Indian	772	0.94
Hawaii Native	++	++
Asian	1623	1.97
Black	410	0.50
White	77284	93.93

*Note***.** Teachers could select more than one category. A teacher selection of Hispanic plus any other race was categorized as "Hispanic." All other non-Hispanic but selected more than one race were categorized as multiracial. ++ Reporting standards not met.

Student Levels and Teacher Assignments

Participants selected the level of students they taught and questions about their positions at the school. Knowing the levels of students being taught and teachers' assignments will support the understanding of who completed the 2020–2021 NTPS survey and assist the reader with knowing the weighted percentages of those with the largest contributions to the survey to those with the least.

Table 5 displays Minnesota students have the highest percentage of teachers at the primary level at 36.62%. High school students were the second highest at 28.90% and middle school at 19.63%. In Minnesota, there are more elementary schools than secondary schools, and more elementary teachers than secondary teachers (Minnesota Department of Education, 2023),

which explains the highest percentage of surveyed teachers from the primary level. The lowest indicated level of students taught was the combined level where a teacher serves students from multiple levels.

Table 5

Level of Students Taught by Minnesota Teachers

	n	*%*
Primary	29289	36.62
Middle	16140	19.63
High	23766	28.90
Combined	13039	15.85
Weighted Total	82234	100

There are many licensure areas for Minnesota teachers, and some may teach in an out-of-field placement or in multiple field placements. Table 6 lists data about the one main general field of teaching study by Minnesota teachers. Fifty percent of teachers are either in the field of early childhood or general elementary education (31.21%) and special education (19.23%), which is common in education because those areas of licensure typically work with a small number of students and therefore more professionals with those licenses are necessary.

Table 6

Minnesota Teachers' General Field of Main Teaching Assignment

	n	*%*
Early Childhood or General Elementary	25667	31.21
Special Education	15817	19.23
Arts or Music	5881	7.15
English and Language Arts	7227	8.79
ESL or Bilingual Education	2643	3.21
Foreign Languages	2283	2.78
Health Education	3721	4.53
Mathematics	5752	6.99
Natural Sciences	4287	5.21
Social Sciences	4748	5.78

Table 6 (continued)

Career or Technical Education	3033	3.69
All Others	1178	1.43
Weighted Total	82235	100

Table 7 reveals the majority of teachers' positions are regular full-time teachers at 93.09%. Part-time teachers are nearly 2.5%, while other positions are below the 2% representational value. The high value of full-time teachers is helpful for the descriptive statistics because full-time teachers are able to reflect on a full teaching load and the impact that may have on their satisfaction at their school, the satisfaction with their salary, the number of years being in the profession, and knowing if their principal communicates the kind of school they want.

Table 7

Q1-1 Teacher's Main Position at the School

	n	*%*
Regular Full-Time Teacher	76548	93.09
Regular Part-Time Teacher	2036	2.48
Itinerant Teacher	1157	1.41
Long-Term Substitute	464	0.56
Library Media Specialist or Librarian	647	0.79
Other Professional Staff	1383	1.68
Weighted Total	82235	100

Findings Related to Research Questions

Descriptive statistics specific to the research question and hypothesis are provided in Tables 8 through 12. The sole dependent variable aligned to the 2020–2021 NTPS survey question, "I am generally satisfied with being a teacher at this school." Just under 10% of Minnesota teachers disagreed with being generally satisfied at their school while 90.27% were

either somewhat or strongly satisfied being a teacher at their school. The numbers clearly indicated teachers were more satisfied at their school than not being satisfied.

Table 8

Descriptive Statistics for Dependent Variable

	Strongly Disagree		Somewhat Disagree		Somewhat Agree		Strongly Agree	
	n	*%*	*n*	*%*	*n*	*%*	*n*	*%*
I am generally satisfied with being a teacher at this school	1575	1.92	6423	7.81	36855	44.81	37381	45.46

Minnesota teachers selected their satisfaction level regarding their yearly salary with the results in Table 9. Strongly disagree and somewhat disagree were nearly identical with a 0.87% difference between the two percentages with 18.08% strongly disagreeing and 18.95% somewhat disagreeing, for a total of 37.03% disagreeing. Strongly agree was the lowest percentage at 16.25% with somewhat agreeing being the highest indicated level of satisfaction at 46.72%, totaling the level of agreement at 62.97%.

Table 9

Salary Satisfaction

	Strongly Disagree		Somewhat Disagree		Somewhat Agree		Strongly Agree	
	n	*%*	*n*	*%*	*n*	*%*	*n*	*%*
I am satisfied with my teaching salary.	14870	18.08	15585	18.95	38421	46.72	13359	16.25

Table 10 and Table 11 address the number of years Minnesota teachers have been in the profession. The time entered by participants was to exclude time while on maternity or paternity leave and time on sabbatical. Teachers were to calculate the time while either a full-time or part-

time K-12 teacher. Table 10 demonstrates 22.51% of Minnesota teachers served 5 or fewer years.

Table 10

Five or Fewer Years Taught

	5 years or fewer	
	n	*%*
Teacher has taught 5 or fewer years	18509	22.51

Table 11 displays years of service from 3 or fewer years, 4 to 5 years, 6 to 10 years, and 11 or more years. The parameters of years were decided as research indicated the highest percentage of teachers quitting occurs within their first 5 years in the profession. Minnesota teachers maintaining in the profession for 11 years or more had the highest percentage with 59.13%. Teachers between 6 and 10 years represent 18.36%, totaling 77.49% of Minnesota teachers surpassing the 5-year mark.

Table 11

Years Taught at the Elementary or Secondary Level

	3 years or less		4 to 5 years		6 to 10 years		11 years and beyond	
	n	*%*	*n*	*%*	*n*	*%*	*n*	*%*
School years as a teacher in the elementary or secondary level	10550	12.83	7959	9.68	15103	18.36	48622	59.13

The final independent variable question regarding teacher satisfaction was, “My principal communicates the kind of school they want.” Teachers strongly disagreeing or somewhat disagreeing totaled 18.05%, while 81.95% somewhat agreed to strongly agreed. Less than 5% strongly disagreed while 40.92% strongly agreed (see Table 12).

Table 12

Principal Communicated the Kind of School They Want

	Strongly Disagree		Somewhat Disagree		Somewhat Agree		Strongly Agree	
	n	%	*n*	%	*n*	%	*n*	%
My principal communicates the kind of school they want.	3676	4.47	11169	13.58	33739	41.03	33650	40.92

Logistic Regression Results

First, the researcher examined the overall model. The R^2 value is a coefficient for which the range (0-1) indicates how much variance in a dependent variable is explained by the independent variables and it is a measure of how well a model fits the data (Patten & Newhart, 2018). A perfect fit would have an R^2 of 1.0 (IBM, 2023). The results of the logistic regression suggest that the negative log-likelihood (pseudo R^2) was 0.107 and the Cox and Snell (1989) pseudo R^2 was 0.070. The results therefore suggest that teachers' salary satisfaction, whether the teachers' principal communicates the kind of school they want, and teachers' length of time teaching explain between 7% and 11% of the variance in teachers' general job satisfaction. The overall regression also demonstrated adequate fit according to the Wald-F test, which is a test to determine if the independent variables in a regression model are statistically significant (Wald-F = 5,381.52, $p < .000$, df = 3, 198) (Agresti, 1990).

Next, the researcher calculated the odds ratios, confidence intervals for the odds ratios, standard errors, beta coefficients, and *p*-values. The odds ratios are a strength of the association between the dependent (teachers' job satisfaction) and independent variables (teachers' salary satisfaction, the number of years spent as a teacher in public school secondary or elementary education, and whether principals communicated the kind of school they want) (Szumilas, 2010). An odds ratio greater than 1.0 suggests that a one-unit change in the independent variable (e.g.,

teachers disagreeing that they are satisfied with their salary compared to agreeing that they are satisfied with their salary) increases the likelihood of the dependent variable (i.e., teachers agreeing versus disagreeing that they are satisfied with their job) (Patten & Newhart, 2018). The standard errors are the standard deviations of the sampling distribution of a statistic–an indicator of the difference between a survey estimate and the true value of the population (Patten & Newhart, 2018). Therefore, it is an indicator of the degree of certainty in survey estimates of the target population (in this case, teachers). The 95% confidence intervals are a range of values in which a true population estimate is likely to fall, and the beta coefficients represent the amount of change in the dependent variable for every one-unit change in an independent variable, holding all other independent variables constant (Patten & Newhart, 2018).

The results of the logistic regression suggest that teachers' salary satisfaction was positively associated with teachers' job satisfaction (OR = 3.048, $p < .000$) (see Table 13). Teachers satisfied with their salary were over three times more likely to have overall job satisfaction than those dissatisfied with their salary. Additionally, teachers who agreed that their principals communicate the kind of school they want were over three times more likely to have overall job satisfaction compared to teachers who disagreed that their principals communicate the kind of school they want (OR = 3.880, $p < .000$). The number of years teachers spent working at the elementary or secondary level was not significantly associated with teachers' job satisfaction (OR = 1.016, $p = .343$).

Table 13

Final Regression Model

	OR	*SE*	*Lower 95% CI*	*Upper 95% CI*	*b*	*p*
Intercept	1.603	0.558	0.810	3.171	0.472	.177
Salary satisfaction	3.048	0.939	1.666	5.573	1.114	.000

Table 13 (continued)

Principal communicates the kind of school they want	3.880	1.125	2.199	6.848	1.356	.000
School years as a teacher	1.016	0.016	0.984	1.048	0.015	.343

Table 14 displays the results from the research question, null hypothesis, and alternative hypothesis. The null hypothesis was rejected because of the significant level of the relationship between teachers' perception that their principal(s) communicates the kind of school they want and teachers' job satisfaction. The researcher failed to reject the alternative hypothesis because of the significance of results in the data.

Table 14

Null and Alternative Hypothesis Results

Research Question	Null Hypothesis	Reject or fail to reject null hypothesis	Alternative Hypothesis	Reject or fail to reject alternative hypothesis
Are there statistically significant ($p < .05$) relationships between the independent variables of Minnesota public school teachers' perception that their principal(s) communicate the kind of school they want, salary satisfaction, length of time working in the profession, and the dependent variable of teachers' job satisfaction?	There are no statistically significant ($p > .05$) relationships between the independent variables of Minnesota public school teachers' perception that their principal(s) communicate the kind of school they want, salary satisfaction, length of time working in the profession, and the dependent variable of teachers' job satisfaction.	Reject	There are statistically significant ($p < .05$) relationships between the independent variables of Minnesota public school teachers' perception that their principal(s) communicate the kind of school they want, salary satisfaction, length of time working in the profession, and the dependent variable of teachers' job satisfaction.	Fail to reject

Conclusion

There is a significant relationship between teachers' job satisfaction when their principal communicates the kind of school they want. The data demonstrated that a principal communicating the kind of school they want will have a more significant positive relationship with teacher job satisfaction than will the number of years in a teacher's career and salary satisfaction. The number of years teachers spent working at the elementary or secondary level was not significantly associated with teachers' job satisfaction. Salary satisfaction did have a significant relationship with teachers' job satisfaction, but not as significant as when a principal communicates the kind of school they want.

Chapter 5: Discussion, Implications, And Recommendations

This study found a significant relationship between teachers' job satisfaction when a principal communicates the kind of school they want. There has been great focus on salary as a factor influencing teacher retention, and typically those staying in the profession have advanced on the salary scale when compared to teachers new to the profession. Therefore, this study controlled for teacher tenure and salary and aimed to determine the efficacy of developing processes for principals sharing the kind of school they want and if it will lead to greater job satisfaction. This chapter will discuss findings from the data, implications for educators and the educational field, recommendations for future research, and ideas for principals to slow the teacher attrition rate.

Discussion

The data from this study suggests Minnesota public school teachers' are three times more likely to report job satisfaction when principals communicate the kind of school they want when controlled for teachers' satisfaction with their salary and the number of years teaching. The participant group had a healthy representation of 93.09% full-time teachers, signifying the majority of participants were able to provide a broad viewpoint of the work and experiences they encounter during a complete school year. Fifty percent of respondents were general education elementary teachers (31.21%) and special education teachers (19.23%). It is important to note the high percentage of respondents from two categories because special education teachers experience high levels of attrition whereas general education elementary do not experience as high levels of attrition when compared to their secondary counterparts. A helpful exercise to digest the information is to view the data through the lens of various teacher groups and inquire

how their duties lead to higher attrition rates and then what strategies a principal can use to counter those attrition factors.

The study's dependent variable question, "I am generally satisfied with being a teacher at this school," resulted in under 10% of Minnesota teachers disagreeing with being generally satisfied. Thus, 90.27% were either somewhat or strongly satisfied with being a teacher at their school. The numbers indicated teachers were more satisfied at their school than not being satisfied. However, 44.81% of teachers somewhat agreed with job satisfaction at their school. This is a high percentage of teachers that have the potential of experiencing factors that may motivate them to strongly agree or somewhat disagree, further revealing the significance of a principal communicating the kind of school they want and how that can sway a large percentage of teachers to feel satisfied with their job.

Interestingly, the 10% of teachers dissatisfied with their job correlated closely to the 11% average yearly attrition rate. This study was not able to determine the percentage of teachers leaving the profession due to dissatisfaction or other reasons. Understanding that 10% of Minnesota teachers are overall dissatisfied, the data from this study demonstrated the insignificant relationship between teachers' overall job satisfaction and the number of years as an elementary or secondary teacher, which contradicts previous research. It is possible the data from Minnesota public school teachers did not reflect the national average but could be due to other factors such as the COVID-19 pandemic (Sokal et al., 2020), the continuing discrepancy of teacher salary versus inflation (National Education Association, 2023), or other present-day issues associated with dissatisfaction.

Teacher reasoning for staying in the profession has a wide range of possibilities but common motives are their love of the content, enjoyment of the students, and culture and climate

of the school and community (Meyer & Allen, 1991). Similarly, common motives to remain a teacher while unsatisfied in the profession are because of an unstable job market (Garcia & Weiss, 2019) and financial repercussions, especially around healthcare and retirement benefits (Kong & Ni, 2023). Observing how a principal has more control over supporting teachers by placing them in their content passions areas, developing expectations for optimal student outcomes, and cultivating a positive school culture, a principal should be able to influence more teachers to feel satisfaction in the previous areas (Holmes et al., 2019; Inandi et al., 2022; Liu, 2005; Mattingly, 2007). However, job satisfaction also had a strong correlation to salary satisfaction. While a principal likely cannot influence salary and benefits, district leaders and the community can be more informed about how competitive compensation will also influence teacher satisfaction and assist with the retention of teachers in their schools.

Salary increases are not sustained with inflation (National Education Association, 2023). In Minnesota, teacher contract negotiations frequently make the news as teachers express their need to feel valued for their personal educational achievements and dedication to the profession while also being able to cover living expenses more comfortably (Education Minnesota, n.d.-a). As the cost of living and daily necessities increase, it will be more important to analyze the attrition rate and teachers' job satisfaction. There is a possibility extrinsic factors like salary will greatly eclipse intrinsic rewards like fulfillment of educating our nation's youth. From the similarity of results in this study, it is likely that future educators will need a healthy pairing of a competitive salary, continued or increased loan forgiveness, and knowing the expectations from their principal to remain in the profession.

The study indicated teachers' number of years in the profession did not have a strong relationship with job satisfaction. That said, it is still important to know how many teachers are

at the various stages of their career. Just over one-fifth of Minnesota K-12 public school teachers who completed the 2020–2021 NTPS have taught 5 or fewer years, while slightly under 60% have taught 11 or more years. The percentage of Minnesota public school teachers leaving within their first 5 years was 22.51%, which was lower than the national average of roughly one-third of teachers leaving the profession within their first 5 years (Darling-Hammond, 2022). The statistics about the duration in the profession aligned with the expectation for the largest percentage of teachers to be several years beyond the 5-year mark because of the attrition rate during the first 5 years.

The study did not specifically address why Minnesota K-12 public school teachers are leaving within the first 5 years, but there is ample evidence and research on the national level to draw conclusions. For example, high percentages of teachers leave because of family or personal reasons, to pursue another job, because they are dissatisfied with school accountability measures, dissatisfied with administration, and dissatisfied with teaching as a career (Sutcher et al., 2016). While some reasons may not be influenced by salary or a principal sharing the kind of school they want, the evidence shows there are indicated categories around job dissatisfaction that point at the influence a principal has on their teachers.

Lack of administrative support can cause teachers to leave the profession. It is possible that an intentionally communicative principal can influence teachers to stay (Inandi et al., 2022; Rachmawati & Suyatno, 2021), a shift to the emphasis on principals to develop the communication skills and routines necessary to inform their staff about expectations, more so than district leaders and teacher representatives negotiating salary. Principals should be cognizant of their delivery of the expectations. It is possible that a principal shared their expectations but not in a supportive manner or one that involved the input of their staff.

This study was not able to determine the manner in which a principal communicated the kind of school they want, but rather simply if they have or have not according to the teacher participant. It is possible a principal did communicate the kind of school they want but the intended recipient of that communication was not engaged or misinterpreted the information. To assist with alleviating that issue, principals should focus on being supportive and approachable, which positively influence teachers' job satisfaction (Aldridge & Fraser, 2016; Frahm & Cianca, 2021; Tarek et al., 2015) and improves working conditions, which retains teachers (Carver-Thomas & Darling-Hammond, 2019). Principals need to evaluate how their message is sent and received by their intended audience to reach their desired outcome.

A mission and vision statement are common practices in public school districts. The mission statement typically describes the purpose of the district, and the vision outlines the process to achieve the mission (Gurley et al., 2015; Pekarsky, 2007). Teacher involvement with the creation of the mission and vision will have more buy-in from teachers as they were influential with the developmental process and tasked with implementation (Taylor et al., 2014). While principals and teachers are often hired with an established mission and vision for the district, principals can leverage the creation and collaboration process with other facets of their leadership. Including teachers in the discussion and development about the kind of school a principal wants will likely lead to a higher percentage receiving the message, understanding the message, and carrying out the expectations.

Genuine satisfaction with being a teacher will yield greater retention results, thus positively impacting our schools. This study was not able to delve into why teachers choose to leave, but it was able to reveal the strong correlation between a principal communicating the kind of school they want and teachers' job satisfaction. Principals developing a mission and vision

with their staff and using their staff as leaders in the building to carry out the duties to meet the mission and vision will lead to higher job satisfaction and retain teachers.

Implications and Recommendations

Connecting the literature review to the results from this study will assist with the identification of parallels, nuances, and differences. The literature review focused on the variables of the research question by exploring main themes consisting of overall job satisfaction, salary satisfaction, duration in the profession, and a principal's communication about the kind of school they want. Weaving the study's results with research will assist with the implications of the independent variables to the dependent variable and conclusions to be drawn to support public school education.

Implications and Recommendations for Teachers' Overall Job Satisfaction

Lack of administrative support was cited as a cause of attrition (Cancio et al., 2013; Karge et al., 1995) and impacts teacher satisfaction to the point of making a teacher nearly twice as likely to leave the profession (Carver-Thomas & Darling-Hammond, 2019). The data from this study did not address the percentage of teachers leaving the profession because of their principal, but did present that teachers were over three times more likely to be satisfied with their job when their principal communicated the kind of school they want. The comparison is not a correlation between lack of administrative support causing teacher attrition and teachers being more satisfied when their principal communicates the kind of school they want. However, the comparison details teachers informed of their principal's expectations are more likely to be satisfied, and satisfied teachers are more likely to remain in the profession.

Student achievement outcomes are typically greater when schools can retain teachers (Bryk & Schneider, 2002; Little, 1982). Teachers hold tremendous knowledge, skills, and

training when remaining in the profession and are more cost effective than new teachers. New teachers cost more because they need training, mentorship, and increased guidance from colleagues and administration. Veteran teachers remaining at the same school can focus on student data and how their teaching practice can improve results, rather than focusing on other aspects of the job that are important but not necessarily directly related to student outcomes. Schools with veteran staff are less likely to experience burnout because they do not need to mentor new staff or receive similar training just because their new staff could benefit from what they have already learned. Additionally, veteran staff usually have an identified school culture and roles they play in the school's success, which helps staff focus on their specific duties and not feel obligated to absorb more tasks. All of this leads to greater teachers' job satisfaction when students are achieving, teachers can focus on student data and teaching practices, and teachers have developed a strong sense of community and culture because of their time together (Carroll et al., 2000; Darling-Hammond & Sykes, 2003; Ronfeldt et al., 2013).

Overwhelmingly, the data in this study associated job satisfaction to the principal communicating the kind of school they want, just as prior research has indicated. This demonstrated that principals' interactions and communication with teachers greatly influence the overall job satisfaction of teachers. Principals must develop the ability to determine if their message about the kind of school they want is consistently being delivered and understood. Most principals do not have their direct supervisor working in the same building, so the principal will need to develop personal accountability measures and seek feedback from their staff to analyze if their message is being understood and conveyed. Without such measures, and especially paired without a satisfactory salary, teachers will likely leave or will be dissatisfied, which likely leads to less engagement and productivity in their practice.

Implications and Recommendations for Teachers' Salary

Many school districts incentivize teachers to stay in the profession by providing higher salaries when earning advanced graduate degrees and increased tenure. Earning a master's degree or other approved options to advance salary is a common route for educators as it increases knowledge and skills in practice. However, satisfaction with salary may not equate to greater satisfaction in the profession (Hendricks, 2015). The data in this study did not address the opportunities teachers have taken to advance their salary or the salary structure of their district, but the data did verify those satisfied with their salary are more satisfied with being a teacher at their school.

Results from Minnesota K-12 public school teachers in the 2020–2021 NTPS survey demonstrated a strong relationship between salary satisfaction and overall job satisfaction. Minnesota teachers were three times more likely to be overall satisfied with their jobs when satisfied with their salary. Out of all K-12 public school teachers in the United States responding to the 2020–2021 NTPS survey, 49% somewhat and strongly agreed with being satisfied with their salary while 51% somewhat and strongly disagreed with being satisfied with their salary. Nearly 63% of Minnesota K-12 public school teachers responded as somewhat and strongly satisfied with their salary on the 2020–2021 NTPS survey. Minnesota public school teachers were 14% higher in the categories of somewhat or strongly agreeing with being satisfied with their salary than the national average, which resulted in .3% more Minnesota teachers being satisfied at their current school than the national average. The data matches the research that indicated teachers are more likely to stay in the profession when satisfied with their salary.

Implications and Recommendations for Teachers' Duration in the Profession

The results of this study indicated the number of years as a public school teacher in Minnesota was not significantly associated with job satisfaction, which contradicts previous research from Liu and Ramsey (2006). Researchers argue the general tasks of teachers have remained consistent as the educational system has not drastically changed, but the growing need for autonomy and empowerment have been on the rise and are indicated as satisfaction needs (Hall et al., 1992; Poulin & Walter 1992). The data from this study did not seek various categories or individual reasons teachers remain in the profession, other than salary satisfaction and if a teacher's principal communicates the kind of school they want. Therefore, the researcher was unable to identify parallels if autonomy and empowerment are associated with job satisfaction (Lee & Nie, 2014) or if those remaining in the profession had strong organizational commitment and decision-making abilities, which are strong indicators of job satisfaction (Bogler & Somech, 2004; Boyd et al., 2011; Dee et al., 2003; Lee & Nie, 2014).

Personal and professional reasons for staying or leaving the teaching profession are expansive and can be compared to the three broad themes of organizational commitment: affective, continuance, and normative (Meyer & Allen, 1991) and the stages of teaching (Reitman & Karge, 2019). A principal knowing the themes of commitment and stages of teaching can impact the principal's ability to leverage commitment to meet the mission and vision of the school. For example, teachers new to the profession are in their first stage of teaching, survival, which may require principals to communicate the mission and vision differently than those in stage three. Similarly, teachers have different organizational ties to the profession which cognizant principals can adapt communication styles and request for supports that match the teacher.

Implications and Recommendations for Principals' Communication

A principal communicating the kind of school they want can look or sound differently. Principals may use a variety of communication mediums such as electronic mail, recorded video, newsletters, or interpersonal communication. Principals may prefer communication in a particular style depending on the number of staff they communicate with, their comfortability with certain communication mediums, a need to communicate with many people at one moment, or they feel a particular form of communication best supports a situation. Whatever the reason or style, the data demonstrated a principal communicating the kind of school they want leads to greater teacher satisfaction.

Knowing positive leadership characteristics of school principals are positively associated with teachers' job satisfaction and commitment to the profession should inspire graduate school principal program directors to align their course studies on leadership to have a positive outcome with teacher retention (Inandi et al., 2022; Liu, 2005; Mattingly, 2007). Acting principals and those in leadership positions within a public school setting should revisit best practices of positive communication and leadership and reflect on how those practices can influence their staff. The implications of principals sharing their expectations with their staff can result in a lower turnover of teachers and a more satisfied staff.

Training principals on best communication practices and establishing a mission and vision routinely shared with staff should be more cost effective than other retention efforts. There are far fewer principals than teachers, so logistically and monetarily, districts should be able to identify internal professionals or locate resources and professionals to teach skills directly related to comprehensive communication. Additionally, principal training on strategies to check

for understanding and implementation measures will greatly support principals in sharing the kind of school they want.

Principal Implementation Recommendations

This study has presented findings that may inspire and support principals to reflect on their current practices and provide further direction and research to aid their specific setting. The data and literature in this study lead to recommended steps that aspiring and current principals can take to increase communication about the kind of school they want to retain teachers. The data presented areas where further research may benefit educators about other attrition factors and their impact on teachers' job satisfaction.

Implementation of Transformational Leadership Theory and Democratic Leadership

Transformational Leadership Theory was detailed in the literature review of this study and is recommended by the researcher as a vital practice to be implemented by principals if they wish to retain teachers. Teachers have expressed satisfaction with principals demonstrating transformational leadership qualities, which include leading with inspiration, motivating staff, modeling desired expectations, and individual consideration (Hooijberg & Lane, 2013; Leithwood & Jantzi, 2000). As the theory title states, the goal is to transform the work and duties through the collaboration and involvement of those on the staff. While a principal's day is undoubtedly busy, a transformational leader will identify moments throughout their day and areas of focus where they can leverage their communicative skills and the involvement of others to perform the work.

Democratic leaders, compared to authoritarian and laissez-faire leadership qualities, lead with a collaborative approach by seeking input from their followers, which results in greater motivation and commitment. Noticeably, transformational and democratic leadership share

similar characteristics, involvement from staff, and desired outcomes. To lead with such qualities will demand that a principal know their teachers' areas of expertise and strengths with teaching practices and ability to work with other colleagues. Knowing this information will get all teachers set up for success by placing them in areas to thrive and know their work is directly impacting the achievement of the school.

Mission and Vision Development

A mission and vision statement should include an understanding of the school environment, include the principal's vision and beliefs of all school members, be communicated with all school members, and encourage all school members to lead with opportunities for continuous feedback (Chen & Yuan, 2021). Authors Gurley et al. (2015) discovered that while schools may be following the aforementioned principles with the development of a mission and vision statement, there is a substantial gap between the theory and practice. Also noted by Gurley et al. (2015), schools are lacking the importance of including student achievement within their mission and vision statement. After all, schools are held accountable for the achievement of students, so therefore a mission and vision should address how that will be accomplished. With that said, a plan on how to carry out the mission and vision statement is equally important to the actual development of the statement. Further affirming the need for principals to have the ability to develop a process that creates a panoptic mission and vision statement and a comprehensive plan to carry out the statement.

Actions for Principals

Principals will first need to reflect on their current communication styles and mediums. Principals should question if their communication is easily received by all intended audiences

and question if the audience understands their message. Principals may want to change or adapt how their message is being sent and embed opportunities for questions or ask the audience to respond with their understanding of the message. It is possible a principal receives a yearly performance evaluation from a superior and includes a reflection survey from their staff. If so, the principal will want to identify the strengths or weaknesses with their leadership and communication. If possible, including a feedback survey with questions specific to transformational and democratic leadership qualities may assist with the growth areas for the principal. Principals can also utilize other close network principal colleagues for conversations about communication and leadership tactics that benefit them, or principals can broaden their network by joining administrative associations or social media networks to connect with others outside of their district in search of ideas and support.

Another way for principals to include their teachers with decision making and execution of work is to develop a leadership team. A leadership team is a group of individuals from multiple grade levels and departments who can speak for the rest of the teachers on their team. The leadership team shall meet at least once per month to discuss agenda items that impact the school, which provides opportunities for staff members to provide their opinions and what may work best for students and staff. The members of the leadership team go back to their department or grade level to disperse the information and tasks that all individuals must complete. The expectations, mission, and vision are much more likely to be received and fulfilled when a team can openly share their ideas, feel valued in the process, and assist with sharing messages and duties.

Leading by example and through inspiration and motivation are other influential qualities of transformational leaders. A visible principal who takes time to informally connect with

teachers can make a big impact in short increments of time. For example, a principal can complete walkthroughs of classrooms 1 day per week or another consistent basis that works within their schedule. A walk through is typically an informal snapshot of a teacher's lesson and an opportunity for the principal to connect with students and the teacher. The principal's duration in the room can vary, but a typical time is roughly 10 minutes. It is important for the principal to leave a note or follow up email with positive affirmations about the teacher's lesson and connect it to the mission and vision of the school. When doing so, the principal is sharing their focus on the expectations of the school and validating the work the teacher is doing, which will likely inspire and motivate the teacher to continue similar work.

Active engagement and involvement with the professional development of the teaching staff is an important area of focus for principals to share the kind of school they want. Collaborating with the staff about professional development needs and when available, having staff members lead the professional development with the principal, demonstrates the value of the staff and models the principal is involved with the teaching and learning. The intellectual stimulation of new learning that the staff wanted, along with utilizing teachers within their own school to develop setting specific applicable learning, will help weave the learning into the school's mission and vision. This creates another opportunity for the principal to demonstrate the kind of school they want and have their message continuously shared through their work and that of their staff.

Recommendations for Future Research

The participants in this study were 71.3% female and 28.7% male. The study did not delineate the percentage of female or male teachers and their overall job satisfaction. It may be beneficial for future research to determine if females or males have different experiences or

measures of job satisfaction. The data from a study about teachers' gender and job satisfaction would pair well with overall job satisfaction from primary and secondary school teachers. Elementary teachers are more likely to be female and secondary school teachers have a higher percentage of male teachers than their counterparts in elementary. Knowing a correlation and significance between the overall job satisfaction of teachers' gender compared to those teaching in elementary and secondary education may help educators across multiple regions and those working in singular elementary or secondary schools.

Minnesota's public school teacher demographics that completed the 2020–2021 NTPS survey were 93% white teachers, which may represent one demographic of teachers but not other diverse populations from Minnesota or other states. Knowing the overall job satisfaction data from other races and comparing that data across multiple races may provide insight to job satisfaction from specific races and if geographic location is a factor. This study also only used data from public elementary or secondary teachers. The private school population is missing from this research and may be worth comparing results to public school teachers to identify if there are relationships between the overall job satisfaction of public school educators compared to private school educators.

Earlier in the study, difficulties with hiring in specific licensure areas were noted. There are many explanations for why it may be more difficult for districts to hire in those areas, but does that also demonstrate a correlation to job satisfaction? Knowing if hard to hire and retain positions and licensure areas lead to less overall job satisfaction may help school and district leaders develop plans to support teachers in those licensure areas. Knowledge about licensure and overall job satisfaction in those areas may also inform higher education institutions about

how to support those educators with strategies to navigate difficulties prior to beginning their career.

Comparing Minnesota teachers' overall job satisfaction if their principal communicates the kind of school they want to salary satisfaction and duration in the career limited other potential variables demonstrating a significant relationship to overall job satisfaction. There are possibilities that other questions from the 2020–2021 National Teacher and Principal Survey may have resulted in a more significant relationship to overall job satisfaction than the principal communicating the kind of school they want. While data from this study demonstrates principals' communication about the kind of school they want can improve overall teacher satisfaction, there may be other factors more beneficial to schools, especially if their principal already excels at communicating the kind of school they want.

Conclusion

Teachers are in a profession with many responsibilities and facets that influence their satisfaction. The education field must remember teachers are individual people, so therefore individual consideration to needs and individual reasons for leaving the profession are bountiful. Through statistics, we are able to develop general categories of commonalities that can lead educational leaders to focus on high impact areas that will support the process of teacher retention. Research points to issues of burnout, student behavior, administrative leadership, salary and benefits, political involvement, and attractiveness of other professions with parallel degrees. Rightfully so, the aforementioned issues are contributing factors to teachers' attrition. However, the laborious duties of many stakeholders, time constraints, and investments needed to address those issues may be too burdensome or expensive. This study demonstrated a significant correlation between teachers' job satisfaction when the principal communicates the kind of

school they want, which may be perceived as an easier and more cost-effective strategy to train principals to communicate the kind of school they want (Lochmiller, 2014).

Transformational and democratic leadership qualities will greatly influence a principal's ability to retain teachers. The data clearly shows Minnesota public school teachers are three times more satisfied with their job at their school of employment when a principal communicates the kind of school they want, resulting in teachers being more likely to stay in their current position when feeling satisfied. Principals can help teachers feel that sense of satisfaction through multiple collaborative efforts, leading to a stronger school culture and greater student academic success. Teacher satisfaction through the efforts of a principal can be achieved by including teachers in decision-making, motivating them through shared leadership opportunities, validating their work, and inspiring them to continue their growth. In addition, principals can increase teacher satisfaction by developing a mission and vision statement that addresses student achievement and how to reach the desired level of achievement through a clear and consistently shared message. Teachers have the greatest impact on student success and consistent teachers in the same building are increasingly effective. The education system owes it to students and teachers to train principals with the necessary skills to effectively and consistently communicate the kind of school they want with the desired outcome of producing satisfied teachers who retain in the profession.

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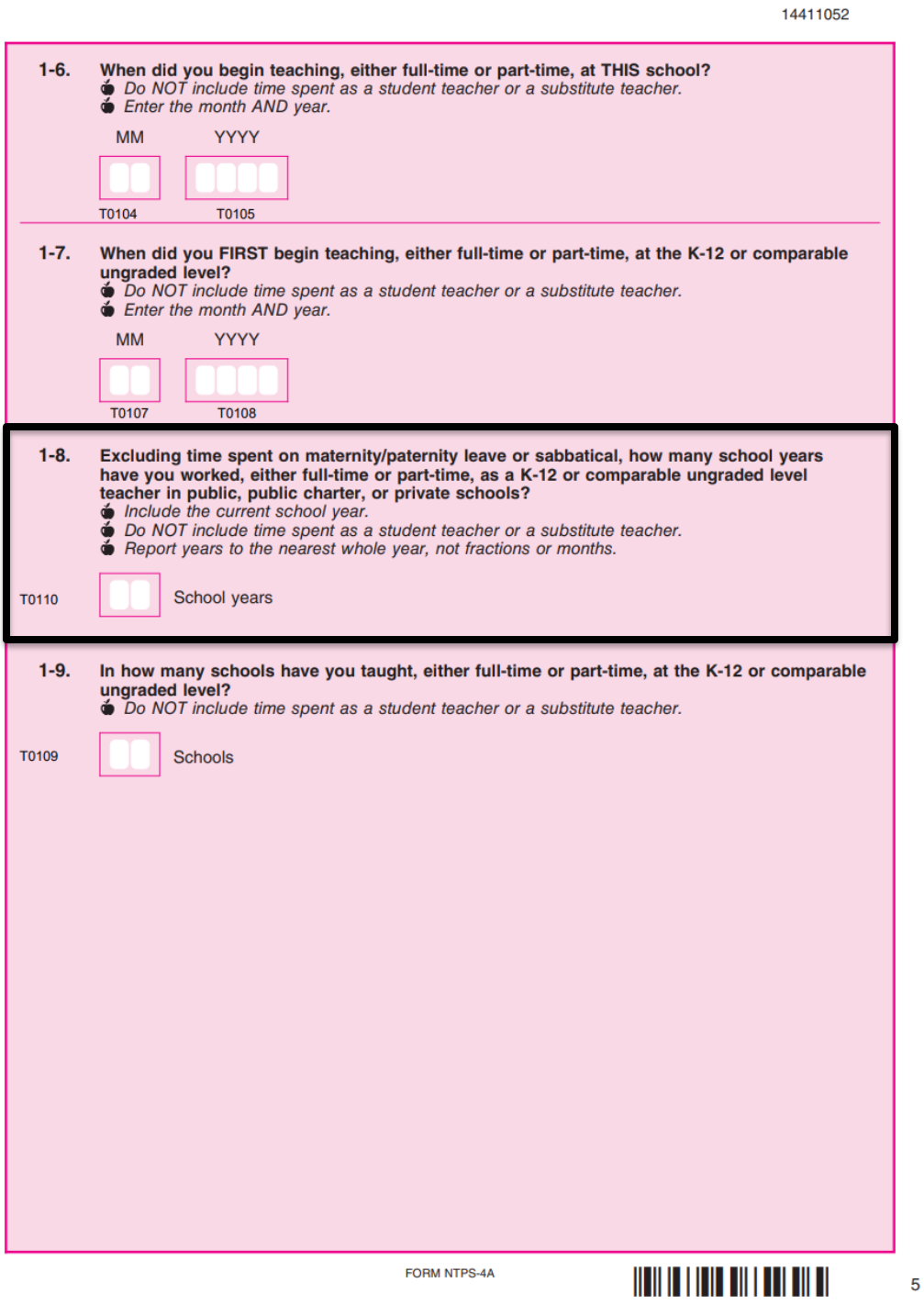
Appendix A

NTSP Survey Questions

The questions used and analyzed from the 2020–2021 NTPS survey are identified with a black rectangular box.



14411052

1-6. **When did you begin teaching, either full-time or part-time, at THIS school?**
- *Do NOT include time spent as a student teacher or a substitute teacher.*
- *Enter the month AND year.*

MM T0104 YYYY T0105

1-7. **When did you FIRST begin teaching, either full-time or part-time, at the K-12 or comparable ungraded level?**
- *Do NOT include time spent as a student teacher or a substitute teacher.*
- *Enter the month AND year.*

MM T0107 YYYY T0108

1-8. **Excluding time spent on maternity/paternity leave or sabbatical, how many school years have you worked, either full-time or part-time, as a K-12 or comparable ungraded level teacher in public, public charter, or private schools?**
- *Include the current school year.*
- *Do NOT include time spent as a student teacher or a substitute teacher.*
- *Report years to the nearest whole year, not fractions or months.*

T0110 School years

1-9. **In how many schools have you taught, either full-time or part-time, at the K-12 or comparable ungraded level?**
- *Do NOT include time spent as a student teacher or a substitute teacher.*

T0109 Schools

FORM NTPS-4A 5

Appendix A

(Continued)

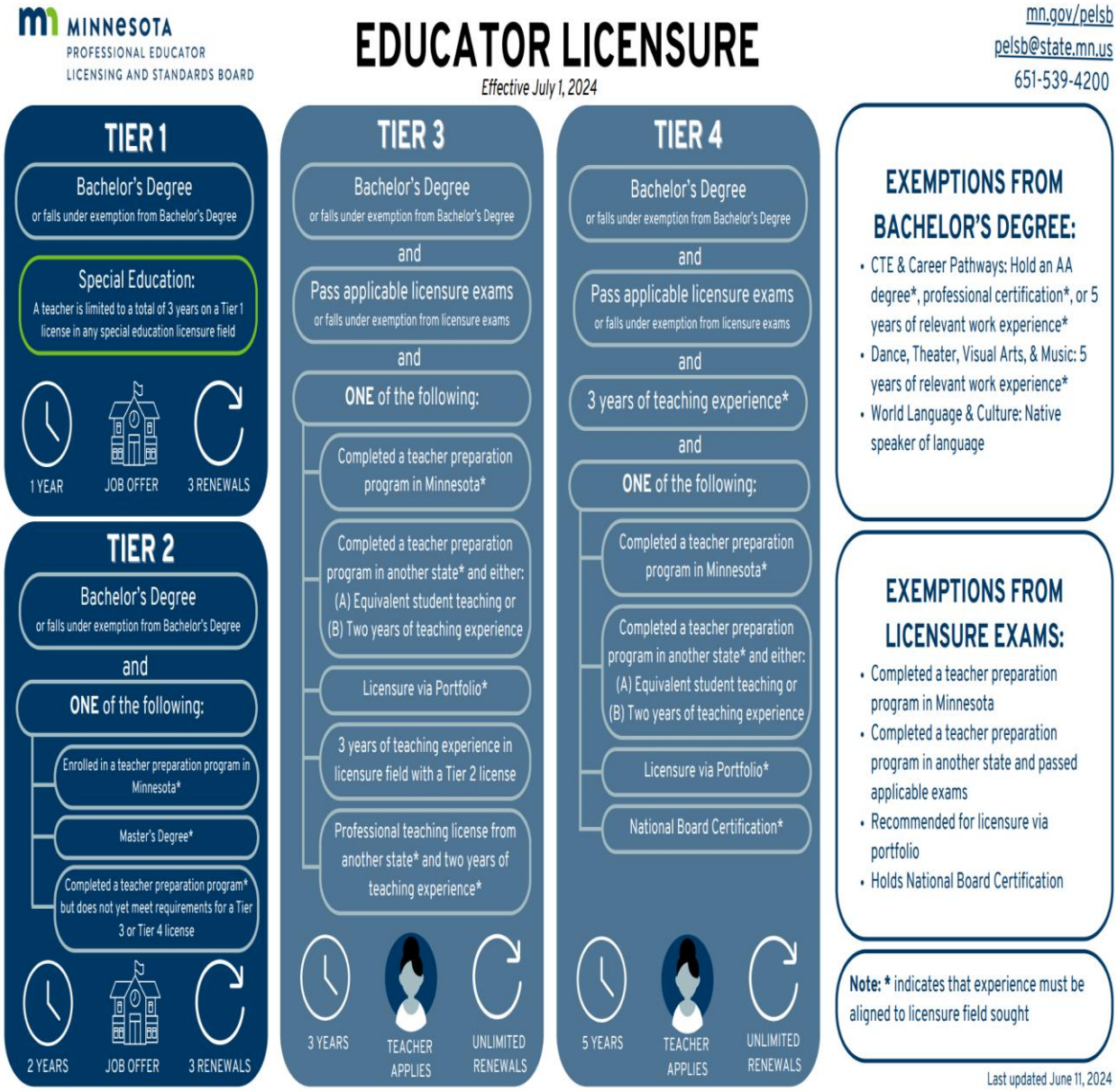
14411292

7-7. To what extent do you agree or disagree with each of the following statements?
Mark (X) one box on each line.

		Strongly disagree	Somewhat disagree	Somewhat agree	Strongly agree
T1713	a. The school administration's behavior toward the staff is supportive and encouraging.	1 ☐	2 ☐	3 ☐	4 ☐
T1714	b. I am satisfied with my teaching salary.	1 ☐	2 ☐	3 ☐	4 ☐
T1715	c. The level of student misbehavior in this school (such as noise, horseplay or fighting in the halls, cafeteria, or student lounge) interferes with my teaching.	1 ☐	2 ☐	3 ☐	4 ☐
T1716	d. I receive a great deal of support from parents for the work I do.	1 ☐	2 ☐	3 ☐	4 ☐
T1717	e. Necessary materials such as textbooks, supplies, and copy machines are available as needed by the staff.	1 ☐	2 ☐	3 ☐	4 ☐
T1718	f. Routine duties and paperwork interfere with my job of teaching.	1 ☐	2 ☐	3 ☐	4 ☐
T1719	g. My principal enforces school rules for student conduct and backs me up when I need it.	1 ☐	2 ☐	3 ☐	4 ☐
T1720	h. Rules for student behavior are consistently enforced by teachers in this school, even for students who are not in their classes.	1 ☐	2 ☐	3 ☐	4 ☐
T1721	i. Most of my colleagues share my beliefs and values about what the central mission of the school should be.	1 ☐	2 ☐	3 ☐	4 ☐
T1722	j. The principal knows what kind of school he or she wants and has communicated it to the staff.	1 ☐	2 ☐	3 ☐	4 ☐
T1723	k. There is a great deal of cooperative effort among the staff members.	1 ☐	2 ☐	3 ☐	4 ☐
T1724	l. In this school, staff members are recognized for a job well done.	1 ☐	2 ☐	3 ☐	4 ☐
T1725	m. I worry about the security of my job because of the performance of my students or my school on state and/or local tests.	1 ☐	2 ☐	3 ☐	4 ☐
T1726	n. State or district content standards have had a positive influence on my satisfaction with teaching.	1 ☐	2 ☐	3 ☐	4 ☐
T1727	o. I am given the support I need to teach students with special needs.	1 ☐	2 ☐	3 ☐	4 ☐
T1728	p. The amount of student tardiness and class cutting in this school interferes with my teaching.	1 ☐	2 ☐	3 ☐	4 ☐
T1729	q. I am generally satisfied with being a teacher at this school.	1 ☐	2 ☐	3 ☐	4 ☐
T1730	r. I make a conscious effort to coordinate the content of my courses with that of other teachers.	1 ☐	2 ☐	3 ☐	4 ☐

Appendix B

Tiered Licensure in Minnesota



Appendix C
Collaborative Instructional Training Institute

CITI PROGRAM

Completion Date 13-Jan-2024
Expiration Date 13-Jan-2026
Record ID 58745384

This is to certify that:

Jason Menth

Not valid for renewal of certification through CME.

Has completed the following CITI Program course:

Doctoral students - Basic/Refresher
(Curriculum Group)
Doctoral students - Basic/Refresher
(Course Learner Group)
2 - Refresher Course
(Stage)

Under requirements set by:

Bethel University

CITI
Collaborative Institutional Training Initiative

101 NE 3rd Avenue, Suite 320
Fort Lauderdale, FL 33301 US
www.citiprogram.org

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