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Perceived School-Associated Factors Contributing to Teacher Attrition in Southwest Minnesota

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by

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Abstract

In April 1983, the National Commission on Excellence in Education released the report *A Nation at Risk*. This report stated, "The educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future as a nation and a people" (United States. Department of Education, 2004, para. 3). The report was the impetus for public education in the United States to prepare youth for work and responsible citizenship, to forge a common culture within an ethnically diverse country, and to reduce inequalities for the common good of the nation (Present, 2010).

The United States is struggling to remain economically dominant in a time when mathematics and reading test scores are not globally competitive (Mathis, 2005). The United States is not ranking competitively on international standardized exams and students today have a lesser capacity to compete globally (National Governors Association Center for Best Practices, 2010). Under performance has sparked several large-scale reforms including "No Child Left Behind," the Reading First Initiative, and currently the Common Core State Standards (Mathis, 2005). Pressures and demands on teachers are greater now than ever before in history and teacher attrition is a major problem (Magruder et al., 2013). These pressures and demands have contributed to attrition from the teaching profession.

Schools have had to cope with attrition by increasing class sizes, increasing teacher working hours, increasing their salaries proportionally—which can strain district finances, and the recruiting of other education professionals (Macdonald, 1999). In addition to the concern about the annual attrition rate for all teachers, the even higher rate of attrition of beginning teachers has been particularly troubling to the field of education (Dee & Wyckoff, 2015). Studies reveal bright college graduates are less likely to enter the teaching profession, and even if they do, they leave in a short period of time (Shen, Leslie, Spybrook, & Ma, 2012).

The purpose of this study was to examine teachers' perceptions in Southwestern Minnesota school districts of school-associated factors related to attrition. More specifically, the study seeks to determine if support from administration, working conditions, relationships with colleagues, and salary are perceived as having a significant influence on teacher attrition.

Administrative support emerged as the most important factor in possible attrition followed by working conditions, salary/benefits and finally, relationships with colleagues. Demographic factors did not seem to have a major impact on how teachers rate the importance of the attrition factors, with the possible exception of district enrollment. The higher degree attained by teachers decreased the possibility of attrition from the profession or school district.

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Chapter I: Introduction

There is a growing consensus among researchers and educators about the single most important factor in determining student performance is the quality of his or her teachers (Saravia-Shore, 2008). Therefore, to meet the national goal of providing an equitable education to children across the nation, it is critical to concentrate efforts on developing and retaining high-quality teachers in every community and at every grade level (Elfers, Plecki, & Knapp, 2006). The retention of public school teachers has been an issue of continuing concern in education (Locklear, 2010). According to the United States Department of Education (2004), in 2001-02, approximately three million teachers were working in public schools in the United States. Approximately 75% were female, and 84% were white (United States Department of Education, 2004). These teachers served a student body of approximately 47 million students growing increasingly diverse (Present, 2010). From 1986 to 2001, the percentage of white students in public United States elementary and secondary school classrooms declined from 70.4 to 60.3%, while the percentage of African-American students increased from 16.1 to 17.2, and Hispanic students increased from 9.9 to 17.1% (United States Department of Education, 2004). Changing demographics make teaching more challenging as there is a push to ensure alignment of all students with the mandates moved forth by "No Child Left Behind" and the ensuing Common Core State Standards (Magruder, Hayslip, Espinosa, & Matera, 2013). In addressing the problem of teacher retention for the benefit of students, this quantitative study examined teachers' perceptions in rural southwestern Minnesota school districts on school-associated factors related to attrition. More specifically, the study seeks to determine if support from administration,

working conditions, relationships with colleagues, and salary are perceived as having a significant influence on teacher attrition.

Background

In April 1983, the National Commission on Excellence in Education released the report *A Nation at Risk*. This report stated, "The educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future as a nation and a people" (United States Department of Education, 2004, para. 3). The report was the impetus for public education in the United States to prepare youth for work and responsible citizenship, to forge a common culture within an ethnically diverse country, and to reduce inequalities for the common good of the nation (Present, 2010). The United States is struggling to remain economically dominant in a time of sub-competitive math and reading test scores on a global scale (Mathis, 2005). The United States is not ranking competitively on international standardized exams and students today have a lesser capacity to compete globally (National Governors Association Center for Best Practices, 2010).

Under performance has sparked a number of large-scale reforms including "No Child Left Behind," the Reading First Initiative, and currently the Common Core State Standards. Pressures and demands on teachers are greater now than ever before in history (Magruder et al., 2013). Studying factors such as teachers' choice to stay or leave are worthy of investigation as they influence student achievement (Shen, Leslie, Spybrook, & Ma, 2012). The research for the study was used to examine several factors in relation to the attrition of teachers from the profession of education. There are limited studies on teacher attrition across the United States

and no studies of teacher perceptions of factors related to teacher attrition in Southwestern Minnesota schools.

Teacher attrition creates unforeseen stresses on school districts. Loeb, Darling-Hammond, and Luczak (2005) reported a significant number of schools with high attrition. These schools must use substitute teachers to fill positions. Such result brings instability for students as they experience a poor quality of teaching as substitute teachers lack the preparation for the teaching profession. Macdonald (1999) noted "the attrition of younger and more qualified teachers also affects the age profile and morale of those who stay" (p. 841). Schools have had to cope with attrition by increasing class sizes, increasing teacher working hours, increasing their salaries proportionally—which can strain district finances, and the recruiting of other education professionals (Macdonald, 1999).

In addition to the concern about the annual attrition rate for all teachers, the even higher rate of attrition of beginning teachers has been particularly troubling to the field of education (Dee & Wyckoff, 2015; Inman & Marlow, 2004). Studies reveal that ambitious college graduates are less likely to enter the teaching profession, in the even they do, they leave after a time (Shen et al., 2012). According to data from the Teacher Follow-up Survey for 2000-01, 8.5% of public school teachers with one to three years of full-time teaching experience left teaching employment annually, whereas only 6.5% of teachers with four to nine years of experience left annually (National Commission on Teaching and America's Future, 2011). Based on these data, the estimated rate of leaving during the first three years was 25.5%, during the first four years was 32.0%, and during the first five years was 38.5% (Boe, Cook, & Sunderland, 2008). Shen et al. (2012) found a U-shaped curve, if teacher attrition is studied

over a span of time. The same study revealed the fact of attrition rates being higher for younger teachers at the onset of their careers as well as for older teachers preparing for retirement (National Commission on Teaching and America's Future, 2011). The time span the attrition rate slows is for middle-aged, middle-career teachers (Shen et al., 2012).

In addition to salary, other school-related factors with an impact on teacher attrition include teacher/student ratio, teachers' involvement in decision making, administrative support, teaching level, student characteristics, and school location (Shen et al., 2012). Levine (2013) cited employment dissatisfaction, primarily due to poor salary, poor administrative support, and student discipline problems (working conditions), as the most frequent reasons admitted by teachers, for leaving the profession. Teacher retention is most closely and positively correlated with greater student/teacher ratios, when teachers have more autonomy in decision-making in educational practices, and having a supportive administration (Shen et al., 2012). The results from the 1994-1995 Teacher Follow-up Survey for public school teachers show that retirement only accounted for 27% of teacher attrition (National Commission on Teaching and America's Future, 2011)

Problem Statement

The United States is struggling to remain the economic leader in a time when mathematics and reading test scores are not globally competitive (Mathis, 2005). The United States is not ranking competitively on international standardized exams and students today have a lesser capacity to compete globally (National Governors Association Center for Best Practices, 2010). Under performance has sparked several large-scale reforms including "No Child Left Behind," the Reading First Initiative, and currently the Common Core State Standards (Mathis,

2005). Pressures and demands on teachers are greater now than ever before in history and teacher attrition is a major problem (Magruder et al., 2013). Studying factors such as a teacher's choice to stay or leave a school, a certain district, or the profession of teaching are worthy of investigation as they influence student achievement (Shen et al., 2012). However, there are limited studies on teacher attrition across the United States and no studies of teacher perceptions of factors related to teacher attrition. Gathered data regarding the perception of teachers on factors leading to attrition in Southwestern Minnesota schools can serve as a representation of this phenomena occurring in the United States.

Research Purpose

The study examined teachers' perceptions of the impact of administrative support, working conditions, relationships with colleagues, and salary on teacher attrition. The study examined the perceptions within a single region of the state of Minnesota by surveying teachers in southwestern Minnesota. The results of this study supplemented the gap in the literature related to teacher attrition in Minnesota.

In analyzing the perceptions of teachers, the data presented in the study provided knowledge of the extent administrative support, working conditions, relationships with colleagues, and salary influence teacher attrition. The study provided school district administrators with information may assist them in strengthening deficient areas or in implementing strategies aimed at retaining high quality teachers.

Research Questions

The study considered the following main questions to address the research problem:

1. What are the major demographic characteristics (including years of experience, education level, school size) of southwest Minnesota teachers?
2. How do select southwestern Minnesota school district teachers report salary, administrative support, relationships with colleagues, and working conditions would influence their decision to leave or consider leaving the profession or district in the future?
3. What relationships exist between the reported demographic characteristics and the reported workplace factors in relation to teacher attrition in southwestern Minnesota schools?

Assumptions, Limitations, and Delimitations of the Study

Data for the study was collected randomly from 15 school districts in southwestern Minnesota which are members of the Southwest/West Central Service Cooperative. A random number generator was used to identify the 15 school districts selected to take part in the study. Each of the fifty-six school districts are members of the Southwest/West Central Service Cooperative were placed in order based on 2015-16 school year enrollments and assigned a number. The districts were then divided into three enrollment clusters; 1-500 students, 501-1,000 students, and 1,001 or more students. The random number generator was set to generate seven numbers for each cluster. The first five numbers selected in each cluster identified school districts. These school districts would be asked to participate in the study and the subsequent two numbers identified those school districts would be selected as alternates in the cluster.

Previous research related to teacher attrition focused primarily on teachers already withdrawn from the teaching profession. The study was designed to determine the relative

contribution of each predictor variable toward teacher attrition by surveying current teachers regarding their intent to stay in the school district or teaching profession. The use of current teachers from southwestern Minnesota created a limitation because the data gathered represented a teachers' perception of a school-associated factor, which may cause them to leave the school district or profession rather than any factors that actually caused them to leave the school district or profession. The relationship between intent and actual behavior is unknown; therefore, the results should be generalized with caution. Nevertheless, given further quantitative study, concrete results may become more available.

Certain delimitations within the study are also apparent. Delimitations are features of a study researchers can control (Marshall & Rossman, 2014). As the study used a descriptive quantitative non-experimental approach, conducted through surveys of 15 southwestern Minnesota school districts, it may not be representative of all school districts in the state of Minnesota. Nevertheless, the results should be transferable to other portions of Minnesota given the large number of districts. Although the results were delimited to a particular geographic area, further studies regarding teacher attrition was examined to represent a more complete picture of the United States.

Definition of Terms

Administrative support: Assistance, encouragement, and support provided by building level administrators to help meet the needs of new and experienced teachers (Allen & Penuel, 2015).

Beginning teacher: A licensed teacher who has under three years of experience (United States Department of Education, 2004).

Collegial relationships: The opportunities, which exist within a school or district for teachers to form and develop meaningful relationships within their school or district. This can be found but not limited to relationships built from mentoring, PLC's, or induction programs (Barth, 2006).

Highly qualified teacher: A teacher who has obtained a license to teach within the state or has obtained full certification as a teacher through alternative licensure options as defined by the state (Elfers et al., 2006).

No Child Left Behind: An act of Congress which occurred during the Presidency of George W. Bush. It is based on setting high and measurable goals to improve individual outcomes in education (Reeves, 2003).

Salary: For the purpose of the study, monetary factors for licensed teachers which include the base salary, benefits, raises, and other monetary incentives.

Teacher attrition: A term associated to teachers which leave the education profession for another field (Loeb et al., 2005).

Teacher migration: A term associated to teachers who leave a school or district to teach in another school or district. The teacher remains in the teaching profession (Boe et al., 2008).

Teacher retention: A term associated with keeping or maintaining teachers within the school, district, or field of education (Adams & Dial, 2000).

Teacher turnover: A term, which refers to teachers who depart their current school or district (Elfers et al., 2006).

Working conditions: A term, which refers to the many factors within a school or district which include but are not limited to; teaching assignment, class size, student discipline, school

policy, potential for advancement, responsibility, school climate, school culture, and conditions of facilities (Macdonald, 1999).

Organization of the Study

This descriptive quantitative non-experimental study conducted through surveys of 15 Southwestern Minnesota school districts consisted of five chapters. Chapter I includes the introduction, statement of the problem, significance of the study, purpose of the study, definitions of key terms, limitations of the study, and assumptions of the study.

Chapter II includes a review of the related literature associated with teacher attrition. This includes the background of teacher attrition in the United States, attributes impacting teacher retention, theoretical factors related to attrition and retention, and strategies for teacher retention.

Chapter III provides an explanation of the research methodology. Research questions and a description of the methodology used are presented. The sample selection and instrumentation are described in Chapter III. The methodology of the research concludes with a description of how data was collected and analyzed.

Chapter IV describes the findings of the research. The results are presented as data and enhanced in the forms of tables, figures, and graphs. This chapter also presents the findings from the analysis and interpretation of the data collected.

Chapter V presents conclusions and recommendations formulated from the data collected. The dissertation concludes with a recommendation for futures studies on the topic of teacher attrition.

Chapter II: Review of the Literature

Introduction

The purpose of the study was to examine teacher perceptions of school-associated factors related to teacher attrition. The study explored selected school districts in Southwestern Minnesota. The study provided school districts and school district leaders with data to assist in improving programs and initiatives for reducing teacher attrition. In preparing this literature review, journal articles were examined to gain an understanding of the research related to teacher retention and attrition. This review includes an overview of the impact on student learning, background of teacher attrition, factors affecting teacher attrition, theoretical factors influencing retention, and strategies for higher retention. Finally, this review examined the trends of teacher attrition in the state of Minnesota as compared to the nation.

Impacts of Teachers on Student Learning

Based on a number of studies (Buckley, Schneider & Shang, 2005; Halpert, 2011; Houston, 2009; Waddell, 2010), quality teachers greatly contribute to the academic success of students. However, providing and maintaining quality teachers in secondary and elementary education are matters of concern, especially in public schools. With the continued increase in student enrollment, this is a challenging time for school districts. According to Elfers et al. (2006), the classroom teacher is one of the key factors, which influence the achievement of students. Therefore, political and educational leaders are required to focus much of their efforts and attention on improving the teaching profession by attracting and retaining highly qualified teachers. "Teacher turnover can negatively affect the cohesiveness and effectiveness of school communities by disrupting educational programs and professional relationships intended to

improve student learning" (Elfers et al., 2006, p. 98). Teacher turnover, as stated in a number of studies (Buckley et al., 2005; Halpert, 2011; Hughes, Matt, & O'Reilly, 2014; Marston, 2014) negatively influenced the achievement of students.

Marston (2014) indicated attrition of teachers resulted in a decline in organizational knowledge among teachers, a skill essential to advance the general learning of students. Moreover, attrition of teachers was likely to negatively impact teachers' working relationships which in turn could affect the environment of the school and student learning. Hatcher, Hulme, and Ellis (1994) shared the importance of understanding the reasons for teacher attrition as teachers are more mobile both geographically and professionally. Teacher mobility has social and economic impacts on education and student success. Without question, reduced student achievement and loss of quality teaching are the most dangerous long-term high teachers' turnover consequences (Buckley et al., 2005; Fisher, 2011; Halpert, 2011; Houston, 2009; Hughes et al., 2014; Marston, 2014).

The Pressures of Increasing Student Achievement

Education is one of the key policy concerns in the United States, as undoubtedly the role the federal government plays in public school education (Ingersoll, Merrill, & May, 2014). Although the federal role has been removed from the management of individual school and curriculum design is a reflection of changing state priorities (Magruder et al., 2013). Current legislation is based upon two decades of reform intended to address educational issues identified in a 1983 national report, *A Nation at Risk*. Based on the report, decrease in the performance of public school education could be attributed to: the need to develop teachers' training recruitment and preparation; inadequate time spent in study, homework and school; lack of accuracy in

expectations; and a need to direct more attention to academic content (Reeves, 2003). A literacy program, The Reading First Initiative, was inspired by the article *A Nation at Risk* to increase the standards of education across the United States (Marston, 2014). The literacy program was started within different federal departments, resulting in the development of new syllabi and testing systems (Marston, 2014). The federal government's effort was later joined by non-governmental groups like the National Council of Teachers of Mathematics (NCTM) through the development of the standards of national academic (U. S. Department of Education, International Affairs Office, 2004).

A study by Locklear (2010) illustrated the rate of teachers' turnover has remained above 9.1% since 2003. The demands for replacement of teachers left the profession rose to 86.3% in 2004 from 63.5% in 2002, despite the consistency in turnover rate. Macdonald (1999) cautioned about "differentials in attrition between state and private school systems have also been reported. There was higher attrition in private schools where pay conditions may be lower than pay in state schools" (p. 838). As per these findings, increased testing, tighter budgets, and teaching conditions as a whole contributed to the problem of teacher retention in a stricter educational environment.

A great number of school districts in the United States have developed a number of targeted retention approaches in order to retain highly performing teachers in public schools (Locklear, 2010). "Pay for performance" structures have been established by some school districts to offer higher salaries to teachers whose students' record high achievement results (Macdonald, 1999). Some school districts advanced differential salary structures to offer higher salaries to teachers who are willing to continue to teach in public schools, especially those within

areas of increased poverty (Schlechty & Vance, 2015). Dee and Wyckoff (2015) found monetary rewards and incentives granted to selected teachers are also awarded based on how difficult it is to fill the position, location of the school, and qualifications of the teaching position. Additionally, both teachers and retention programs seek to develop opportunities for highly skilled teachers to receive advanced certification. Finally, in some school districts, there are mentoring programs aimed at decreasing new teachers' anxiety and frustration, thereby increasing the rate of retention of teachers (Black, 2001). Yet, significant number of these measures have only added to the pressure of having "to perform" and this makes the teaching profession much less attractive to potential teachers (Marston, 2014).

The Negative Impacts of Instability in the Teaching Force

Teacher attrition creates unforeseen stresses on school districts. Loeb et al. (2005) reported a significant number of schools with high attrition rates use substitute teachers to fill positions. This causes instability for students; substitute teachers lack the consistency in preparation for effective teaching. Macdonald (1999) noted "the attrition of younger and more qualified teachers also affects the age profile and morale of those who stay" (p. 841). Schools have had to cope with attrition by increasing class sizes, increasing teacher working hours, and increasing teacher salaries proportionally which can strain district finances (Macdonald, 1999).

Furthermore, with a decreased number of stable and qualified teachers willing to enter the field of education, and an increased number of expert teachers reaching the retirement age, it is increasingly difficult for school districts to hire and retain professionals in classrooms. Schools' bureaucratic organization limits the control teachers have, also resulting in an increased turnover rate (Houston, 2009). The rate of teacher turnover is considerably higher compared to other

professions across the United States. Unsustainable and alarming numbers of teachers are constantly leaving teaching as a profession frequently after only a short period teaching (Houston, 2009). The National Commission on Teaching and America's Future (2011) reported an exodus of nearly one thousand teachers from the profession on every single school day. This increased teachers' turnover rate is due to attrition and retirement (National Commission on Teaching and America's Future, 2011). Nevertheless, according to the studies by Halpert (2011), Buckley et al. (2005), and Waddell (2010), retirement is not the main reason for increased teacher turnover. According to Halpert (2011), only 16% of teacher attrition in the public district school across the United States can be accredited to retirement. The remaining 84% of attrition results from the transfer of teachers between schools and teachers' dissatisfaction with their work. Often this results in a permanent departure from the teaching profession to secure more satisfying work in other fields (Halpert, 2011).

Background of Teacher Attrition

It has been noted "during the past decade or so, teacher turnover has become a major concern in educational research and policy analysis because of the demand it creates for replacement teachers" (Boe et al., 2008, p. 7). Increased teacher turnover has also been a key issue for public school districts in the United States since implementation of the 'No Child Left Behind Act.' Reeves (2003) cited 'No Child Left Behind' has been extremely difficult on rural school district retention as teachers did not have appropriate licensure or qualifications to teach multiple classes within the same content area. The highly-qualified teacher provision in the 'No Child Left Behind Act' required a bachelor's degree as part of the teachers' qualification, full

state certification or licensure, and be able to demonstrate a thorough understanding of every subject they teach.

These requirements posed more professional development and training demand for the multi-subject teaching positions common to the small rural school. Such demand places rural schools at a disadvantage compared to urban schools (Beesley & Barley, 2010). Staffing and retaining qualified teachers in classrooms in rural schools has been a great challenge. Attrition in this case is not associated with a teachers' inability to handle the challenges, which come with teaching, but rather for a host of varying reasons (Beesley & Barley, 2010).

Chen, Knepper, Geis, and Henke (2000) and Houston (2009), reported nearly half of the new teachers leave teaching permanently within the five years of joining the teaching profession. Also, according to the same study, on numerous occasions the best and brightest entering the teaching profession are the first to leave. Based on the study conducted by the National Commission on Teaching and America's Future (2003), the percentage of teacher attrition per year in low-poverty public district schools was 12%, compared to 20% in high-poverty schools. Regardless of the difference in the rate of teacher attrition between wealthy and poor schools, or urban or rural environments, teacher attrition impacts all schools (National Commission on Teaching and America's Future, 2003). However, Beesley and Barley (2010) revised the situation about rural schools facing numerous of the same challenges as urban schools, with respect to poverty, and often have additional obstacles in the form of teacher recruitment and retention.

Historical Context of Teaching

In the United States, teaching as a profession has long had precarious standing (Marston, 2014). Although, over the years, teaching has relished public gratitude, there is a taint related to teaching and with the individuals choosing this profession (Hughes et al., 2014). Compared to other professions, such as medicine and law, teaching has been categorized as a semi-profession. Gallo and Beckman (2016) pointed out the high expectations teachers may have for themselves and their profession, contrasted to the poor recognition of the profession from professional communities and the government. Before the 1950s, teaching was considered a short-term profession, mostly for women before marriage and by men as they were preparing for real professions (Gallo & Beckman, 2016). In the occupational hierarchy, teaching had low status, especially considering the perception of connection to childcare. Teaching was, therefore, regarded as the work of women. The view of teaching as lesser is a contributor to the teacher attrition problems experienced in public schools (Hughes et al., 2014).

The current state of the teaching profession in the United States of America has been molded through factors like technological advancement, educational purpose, gender, and students' success on standardized assessments (Marston, 2014). Since the inception of public schooling, the challenges teachers have faced, and still face, include low salaries, low professional status, as well as low ratings on job satisfaction (Halpert, 2011). Halpert's (2011) study indicated the female gender dominance in the teaching profession, due to historical influence. Although a number of studies inform about male prominence as teachers at times, their roles of teachers have been limited—particularly after education became compulsory for all

children. The result of this gender imbalance also contributes to an increased need for more teachers (Marston, 2014).

The Recent Growth of Teacher Attrition

The attrition of teachers in public schools is expected to be a significant issue in the coming years in the United States. Generally, there is an increase in the number of teachers retiring each year. Reports from an investigation on teacher turnover in the United States revealed teachers' perception of retirement to be a lesser cause of them leaving the teaching profession, bringing out job satisfaction as the bigger issue. A significant number of teachers choose to retire because of the increased dissatisfaction with the profession (Hughes et al., 2014). Other variables perceived by teachers as determinants for leaving include student discipline issues, lack of say concerning policy in the schools, workload, and lack of time to plan for teaching (Hughes et al., 2014). Large-scale shifts in population have also been a significant factor in teacher attrition. Chapman, Snyder, and Burchfield (1993) argued the populations grow during difficult financial times places a strain on school systems to come up with adequate fiscal resources to pay quality teachers. This has made the work of teachers increasingly difficult as they have had to do more as teachers outside the scope of "teaching." Districts have been forced to do more with fewer resources.

In another study, Boe et al. (2008) found teacher turnover is attributed to three key areas of concern. These include school migration, transfer to another area of teaching, and exit attrition. Moreover, the decision to leave or remain in the teaching profession is influenced by both intrinsic and extrinsic factors (Boe et al., 2008). On a number of occasions, intrinsic factors have permitted teachers to endure, whereas extrinsic factors have greatly contributed to an

alarming number of teachers departing education as a profession. Based on a study by Houston (2009), the major reasons for attrition include: low salary, lack of support from administration, and unfavorable working conditions. According to Houston (2009), the retention of highly qualified teachers is an essential factor in solving the attrition dilemma. Regardless, the bibliographic research is clear about teacher retention and the direct correlation to a school districts' need to come up with strategies to attract, and retain, qualified teachers.

Factors Impacting Teacher Attrition

The Alliance for Excellent Education (2007) estimated a departure of about 150,000 teachers every year and about 230,000 teachers switch schools yearly. As noted by Shen et al., (2012), "This phenomenon causes concerns about the quality of the teaching force. In addition to the issue of quality, high rates of teacher attrition disrupt program continuity and planning, hinder, and increase school districts' expenditures on recruiting and hiring" (p. 81). Yet, for this to be attained, political and educational leaders need first to be aware of the major factors contribute to teacher attrition which include: teachers, personal choices, monetary issues, facility impacts and teachers' satisfaction maintenance issues, accountability movement, school organization, and teacher preparation (Makovec, 2008). Past theories assumed retirement and an increase of the student population as the main reason for teacher attrition. Clearly additional factors play a role (Shen et al., 2012).

Marston (2014) indicated there are three categories to be used to frame teacher turnover in the United States: rational or organizational factors, work place satisfaction factors and demographic factors. Organizational factors have been found to have an effect on teachers' turnover. For instance, in the case of teachers are being rewarded for performing well, in terms

of student achievement, the rate of teacher attrition is likely to be low (Mark, 2008). Teachers are encouraged to stay in a given school through recognition and in being included in the decision-making process. This gives teachers empowerment, a sense of belonging, and pride (Marston, 2014). One factor stood out in clearly Marston's (2014); the rate of turnover and lack of teachers' job satisfaction were positively correlated. Three key components influencing job satisfaction are opportunities for profession improvement and growth, benefits, and pay.

Additionally, and according to Marston, demographic factors such as age have great impact teacher turnover. For instance, new or young teachers are more likely to leave teaching than experienced or veteran teachers. Macdonald (1999) suggested higher attrition rates in the early years of the profession as teachers are focused on surviving the learning curve associated with teaching, while often trying to establish personal lives. Young and new teachers leave teaching in search for other well-paying jobs because they are dissatisfied with starting salaries and present working conditions as compared to veteran teachers.

Yet, most teachers, including experienced and new teachers, claim the amount of work at school is too challenging (Gritz & Theobold, 1996). This might be because of the added duties outside the classroom, or having to teach multiple classes resulting from increased number of student enrolment in public schools (Gritz & Theobold, 1996). Gritz and Theobold (1996) found the problem of attrition being exacerbated by societal pressures. Changing technology, new educational priorities, more school diversity, and the expanding role of schools to teach social responsibility has left teachers with the feeling they lack the ability to effectively manage all of these components. As such, teachers may be less inclined to stay in the profession. Non-teaching responsibilities as well as large quantities of paperwork contribute to demanding

workload as well. Based on a number of studies (Buckley, Schneider & Shang, 2004; Halpert, 2011; Hughes, Matt & O'Reilly 2014; Locklear, 2010; and Marston 2014) increased paperwork takes up much of teachers' time and forces them to do extra work beyond their normal working hours.

Finally, teacher turnover is expensive. An Alliance for Excellent Education Issue Brief (2005) cited by the United States Department of Labor in 2003, showed a conservative national estimate for replacing public school teachers at $2.2 billion per year. The cost increased to $4.9 billion per year after adding in the migration costs of teachers moving to different schools. These are annual school district costs often hidden and are usually paid by tax-payers and the states as funds budgeted to teach and retain new teachers. Unfortunately, it is just these teachers who tend to leave the profession most often (Locklear, 2010).

Teacher's Salary

Salary is a major issue when considering teacher attrition and retention. Gallo and Beckman (2016) argued increasing teacher salaries is the most significant and effective way to reduce attrition. Dee and Wyckoff (2015) supported this argument noting it has been demonstrated throughout the United States that when beginning teachers are paid more initially, they stay longer. Gritz and Theobald (1996) concluded salary increases of $3,000 was a threshold from discouraging attrition.

In the 1960s, low salary was the major cause of increased teacher attrition based on a number of studies. Gritz and Theobald (1996) found compensation is the most important influence on the decision to remain in teaching, even more so for male teachers given the tendency for them to be paid more than women in most professions. Houston (2009) found in

his study a number of teachers exiting teaching permanently look for other jobs in fields pay more—as salary appears to the major criteria for success. The findings by Buckley et al. (2005) showed the leading cause of teacher attrition is due to "the profession's relatively low wages, especially considering the number of years of higher education that the average state-certified teacher has completed" (p. 1109).

In the course of investigating career retention in the teaching profession, there is a need to focus on three aspects of salary. The first aspect is the significance individuals assign to salary in relationship to remaining in a certain career. The second aspect is the perception of salary earned symbolizes professional achievement, which may be significant given individuals have varying perceptions of achievement. The last aspect is the need to examine the actual salary being made by teachers who choose to leave, verses those teachers who remain in the profession (Halpert, 2011; Buckley et al., 2005; Houston, 2009; Waddell, 2010).

In multiple studies (Buckley et al., 2005; Fisher, 2011; Halpert, 2011; Houston, 2009; Hughes et al., 2014; Johnson, Berg, & Donaldson, 2005; Locklear, 2010; Marston, 2014), researchers found a teacher's salary is the major determinant of public school teachers' decision to remain in the profession. Levine (2013) reported in a survey of teachers considering leaving the profession, "salary considerations" were cited as the most important factor in the decision-making process. In an Alliance for Excellent Education Issue Brief (2005) it was reported "14.2% of all public school teachers who left the profession in 2004-05 cited salary and benefits as the main reason" (p. 3).

Several studies indicated teachers are paid much less than employees in other professions. For instance, Embich (2001) revealed teachers' salary for the past 30 years

improved only marginal as compared to salaries in other professions. On average, a teacher's salary is 12% lower than in other positions requiring comparable college credits. One report from the U. S. Department of Education (2004) showed if one calculates teacher pay on an hourly basis, it is by some calculations the highest of comparable professions. However, this report does not take into consideration the lack of school during the summer months or all the work teacher do outside of the classroom. For these reasons, pay comparison can be difficult and reports must be approached critically.

Newly graduating teachers also find it difficult to repay students' loans because of low teacher salaries. Therefore, it is less likely college graduates were willing to enter into teaching as a profession (Herzberg, Mausner, & Snyderman, 2011). For those who do stay, there is often some form of additional incentive other than salary. In a study by Ingersoll et al. (2014), teaching experience and graduate education significantly determined the salary earned by teachers. Frequently, teachers are only guaranteed pay raises in the event they take additional courses, regardless of whether they are pursuing an advanced degree. While this can be seen as an additional stressor, more often than not, this affects teacher retention positively. Studies employing national data sets and state administrative data have found teachers are more likely to quit or transfer when they work in districts with lower wages, especially relative to alternative wage opportunities in other professions (Shen et al., 2012; Stinebrickner, 2001, Gritz & Theobald, 1996). Consequently, the comparative attractiveness of jobs in other professions is also a turnover cause.

Working Conditions

Poor working conditions are a key component of teachers' dissatisfaction with the profession. This often includes various areas involving, but not restricted to, job responsibilities, duties, unnecessary interruptions, availability of resources, lack of proper planning, excessive paperwork, lack of support from colleagues, and general workplace conditions (Hughes et al., 2014). Bacharach and Bamberger (1989) noted "Increasingly the belief has been established schools with poor working conditions result in high levels of stress and dissatisfaction will also experience higher levels of teacher turnover" (p. 317). Several research studies have addressed the connection between working conditions and a teacher's decision to remain in a teaching position. Based on a number of surveys conducted by different researchers, a significant proportion of public school teachers have often stated working conditions are one of the key reasons why they leave teaching as a profession Buckley et al., 2005; Fisher, 2011; Halpert, 2011; Houston, 2009; Hughes et al., 2014; Locklear 2010; Marston, 2014).

According to Locklear (2010), North Carolina Teacher Working Conditions Survey indicated working conditions play a major role in the performance of student and teacher retention. Regardless of teachers' years of experience, teachers tend to view the conditions of working equally. Some of the items ranked highly by teachers in improving the conditions of the work environment include professional development, instructional and technological supplies, and planning time (Locklear, 2010). This is a clear indication attention needs to address retention. In the United States, North Carolina was the first state to address the retention of teachers by taking teachers' perspectives into consideration (McCoy, Wilson-Jones, & Jones,

2013). Initiatives to assess teachers' working conditions were established by the state Governor, to improve the rate of teacher retention within the state's public schools (Locklear, 2010).

In line with Macdonald (1999) and Wildwood, Amundson, Cassellius, Ditschler, Jesson, and Rosenstone, 2015), findings the condition in which an individual works usually affects his/her performance. In turn, this determines the kind of satisfaction acquired from their work. For instance, in the case where teachers feel they are unsatisfied, disrespected and demoralized, their morale is negatively affected. Ultimately, this affects their performance in work. Some of the morale issues are exacerbated by factors as seemingly inane as needing more supplies in the classroom. Failure to address all factors, large and small, create poor working conditions, which lead to teacher attrition (Strange, Johnson, Slowalter, & Klein, 2012; Wildwood et al., 2015).

Buckley et al. (2005) conducted interviews of public school teachers in New York City in the 1990s and a significant number of teachers reported they did not have access to basic supplies. Often, they used their own funds to equip their classroom. Teachers also reported they did not have enough textbooks or that "the textbooks they did have were in poor condition and since the school copying machines were frequently broken they had to rely on private resources to reproduce classroom materials" (Buckley et al., 2005, p. 1110). These particular conditions are very common in both rural communities and in low-income schools (United States Department of Education, 2004). In their argument, Buckley et al. (2005) stated teachers' salary is not all matters in making decisions on matters regarding retention; school working condition also play a significant role. Based on their findings, teachers might willingly work for lower salaries as long as the working conditions are good.

Elfers et al. (2006) reported according to a series of national studies, poor working conditions are also related to issues like "student misbehavior and disinterest, lack of teacher autonomy, unreasonable teaching assignments, lack of professional development opportunities, and inadequate allocation of time all contribute the departure of teachers" (p. 98). Rosenholtz and Simpson (1990) found core instructional tasks give teachers the most job satisfaction and therefore it is critical that issues related to misbehavior and policy be dealt with appropriately. Teachers can focus on instruction and improving the performance of their students if misbehavior is not the main concern. Further, regarding working conditions, Rosenholtz and Simpson asserted "a school's rules or a rigid hierarchy constrains the teacher's flexibility tend to interfere with the performance of the core instructional tasks and to undermine the teacher's sense that his or her decision-making ability is respected" (p. 244). These factors are also a part of working conditions and teachers' voices need to be heard.

Facilities are an important part of working conditions in schools because most, if not all, teaching takes place in a school building (Macdonald, 1999). That being said, the "quality of the location can affect the ability of teachers to teach, teacher morale, and the very health and safety of teachers" (Buckley et al., 2005, p. 1111). Buckley et al. (2005) contended factors like indoor air quality, thermal comfort, and lighting can affect student achievement, student and staff health, and teacher performance. Buckley et al. further noted "17 studies from the mid-1930's to 1997 found appropriate lighting improved test scores, reduced off-task behavior, and played a significant role in the achievement of students" (p. 1112).

Public school teachers often emphasize their ability to control classroom temperature and lighting as critical to not only their performance, but to that of their students. A 1999 study by

the Heschong Mahone Group, covering more than 2,000 classrooms, indicated the students with the most classroom daylight progressed faster and higher in math and reading in one year as compared to students learning in classrooms with the least amount of daylight (Buckley et al., 2005). Not only do healthy environmental conditions positively affect the students, but the teachers as well. At the least, more satisfactory teaching conditions serve to allow teachers to perform better, granting greater achievement for their students.

Factors Impacting Teacher Retention

Teachers in United States often state the major reason to continue working in public district schools is due to their personal investment in their students and the school (Makovec, 2008). Additionally, teacher retention is influenced by the school community, teachers' decision-making opportunities in schools and classroom matters, and in the level of administrative support teachers receive (Marston 2014). Buckley et al. (2005) added retention can also be influenced by resiliency, which refers to positive adaptation of an individual in the context of repeated, often excessive, difficulties.

Although certain studies were primarily concerned with the retention of teachers, in her research Waddell (2010) directed much of her attention to the major reasons why teachers chose to remain in the profession. There are several characteristics identified in her study, which included: intellectual work, desperation and anger, possibility and hope, love and teachers' and a belief in shaping the future through teaching students. Alternatively, Johnson et al. (2005) opposed a number of these studies (Buckley et al., 2005; Halpert 2011; Houston, 2009; Waddell, 2010) stating 100% teacher retention is undesirable, because this clearly implies even poor-quality teachers need to be retained. According to Johnson et al. (2005), teacher's attrition can at

times be beneficial to public schools. Although it is desirable to have good teachers who influence the learning of students positively, there are other poorly performing teachers who impede the progress of some students. Their argument was it is essential to have annual teacher turnover to remove poorly performing teachers in public schools and to bring in fresh perspectives. Johnson et al. (2005) insisted annual attrition of teachers infuses fresh insights and ideas in the organization These authors clearly stated ineffective public school teachers should not be retained as the primary goal should be to retain high quality educators in public schools.

Advanced education is also another strategy, which has been shown to help increase teacher retention. Adams and Dial (2000) noted in their research additional academic degrees are helpful in preventing teacher burnout and leaving the profession. These authors posited "The reasoning is that, since teachers with additional degrees have a greater investment which they might lose if they switched careers, these teachers will remain in teaching longer" (Adams & Dial, 2000, p. 359). The data from their findings also showed "teachers with bachelor's degrees are about 68.1% more likely to leave the teaching profession compared to teachers with graduate degrees" (p. 361).

Finally, as noted by Shen et al. (2012), school-associated factors influence teachers' decision to either stay or leave the classroom include the location of the school, the characteristics of the students, the teaching level, administrative support, teachers' engagement in school decision-making, and the student/teacher ratio. The retention of teachers, based on several studies, positively relates with adequate administrative support, more teacher engagement in school decision-making, and a smaller student/teacher ratio (Buckley et al., 2005; Halpert 2011; Houston, 2009; Marston, 2014; Shen et al., 2012; Waddell, 2010). Moreover, as compared

to teachers at the elementary school level, teachers at the secondary school level often leave the teaching profession sooner. School districts report increases in teacher attrition in secondary schools even more so in rural areas (Curtis et al., 2014; Schlechty & Vance, 2015; Waddell, 2010).

Administrative Support

Effective schools are crucial for the next generation of learners and school leaders have a responsibility to ensure teacher and student success. Saravia-Shore (2008) noted in a global economy and era of reform, there are initiatives leaders must take to maintain school standards. Teachers play the main role in ensuring student performance improves since they play the largest role in the classroom and in teaching the curriculum (Saravia-Shore, 2008). Tesfaw (2014) emphasized it is most often the principal of the school who is needed to provide support and motivation for teachers to perform their roles effectively. The support from administration was cited as a key factor in numerous studies, which influence teacher attrition. Therefore, lack of support from administration leads to high teacher attrition. Alternatively, if the administrative support of teachers is in evidence, teachers were encouraged to continue teaching—thus increasing teacher retention (Schlechty & Vance, 2015). Hughes et al. (2014) also noted it is critical for the principal to provide multi-levels support to environmental, instructional, technical, and emotional areas to improve teacher retention.

Buckley et al. (2005) emphasized in their study administrative support toward teachers is the major influence on a teacher's decision to stay in a particular school and in the field in general. The attrition and burnout rate is likely to be reduced if principals help to mitigate new teachers' stress through support and recognition. For new teachers to remain in the teaching

profession, they need to experience a sense of accomplishment. Within a professional school environment, new teachers can be encouraged to stay. Buckley et al. (2005) also included in their study the way in which certain school factors contribute the commitment of newer teachers to the field of teaching. Their study showed new teachers are more likely to be affected by the non-teaching obligations, and the ways in which the school manages students' behavior, than experienced teachers (Buckley et al., 2005).

In addition, some of the commitment predictors for teachers in their school may include: performance efficacy, psychic rewards, and the teacher qualification (Ingersoll et al., 2014). Lastly, teachers' learning opportunities such as mentorship programs for new teachers, and professional development can predict a teacher's level of commitment (Buckley et al., 2005; Halpert, 2011; Hughes et al., 2014; Locklear, 2010; Marston 2014). This was evident in the study reported by Allen and Penuel (2015) when 82% of 914 surveyed teachers, who had five years or less of experience, noted they would choose experienced leaders who would support them, as compared to taking a job with a higher salary and poor administrative support.

Clearly, school leadership is a determining factor for encouraging and retaining good teachers. The best administrative staff members are those who are warm, open, good listeners, and supportive in multiple ways (Allen & Penuel, 2015). Bogler (2001) found teachers who are asked to take part in the decision-making process in their schools feel more involved and committed to their jobs. Furthermore, the more teachers perceived their principal to be a transformational leader, the greater the job satisfaction (Bogler, 2001). According to Collingridge (2008), school administrators have strong influence over teacher stress. Teacher stress is often due to lack of rewards and recognition from management causing teachers to feel

less important and unsupported. Collingridge further asserted "Administrators have the ability to provide recognition and rewards which can diminish feelings of frustration amongst the staff" (p. 43). Billingsley (2004) found overall teacher satisfaction created a desire to stay in the profession, was directly associated with having support from leadership, and facilitated lower levels of role conflict and pressure. Based on the North Carolina Teachers Working Condition Survey (2012), having a positive collegial school environment, along with great leaders, is the most important factor in a teachers' decision to remain in the profession.

Collegial Environment

As opposed to teacher satisfaction or dissatisfaction with school administration, support from colleagues is valuable as well (McClure & Reeves, 2004). When teachers have an opportunity to share their views on certain matters, and to participate in school decision-making, this acts as an equalizer and contributes to the retention of both new and veteran teachers. Locklear (2010) indicated even though low salary appears to play a key role in teacher attrition, a greater determinant of current teachers' career decisions is more likely to be influenced by the environment itself (Buckley et al., 2005; Houston, 2009; Waddell, 2010). The availability of proper resources, guidance, support, and a feeling of comradery are some of the crucial factors are likely to make a public school teacher chose to remain in the profession. Colleagues who are positive tend to offer this type of assistance— along with problem solving approaches and encouragement. Based on this research it is clear there is a positive relationship between collegiality and teacher retention, especially for newer teachers.

New teachers are also encouraged to remain in teaching through public school induction and mentoring programs. Through mentoring, new teachers are more capable of adapting to

difficulties as they arise. Often this includes having positive role models who are concerned about their struggles. Black (2001) found teachers who were not involved in a mentoring program felt they were left to either sink or swim. She also found an increasing number of school officials are now supporting induction and mentoring programs. In the Clearinghouse on Teaching and Teacher Education, Weiss and Gary (1999) reported teachers were more likely to return to the profession year after year if they were involved in an induction and mentoring program. According to Smith and Ingersoll (2004), studies demonstrated new teacher attrition rates can be cut by close to 50% through a comprehensive induction and mentoring program. Smith and Ingersoll further noted in their study that a comprehensive program needs to include items such as: professional development, scheduled interaction with other teachers, and formal assessments throughout a teacher's first couple years in the profession.

Strong, Villar, and Fletcher (2008) asserted is also critical for mentor teachers to be partially released from their own teaching assignments to work with their mentee teacher. A mentoring and induction type program was also explored in the work of Allen and Penuel (2015). They referenced a school district in California, which uses a Beginning Teacher Support and Assessment (BTSA) program. The program paired new teachers within their first and second years of teaching with a veteran teacher for two consecutive years. In this program, the new teacher was observed by the principal, the veteran teacher, and a trained BTSA observer. This program provided early intervention help and support for new teachers and yielded a 98% retention rate. As the research has shown, such solutions help not only the new teacher but also leads to academic gains for students. Both new and experienced teachers greatly rely on the

support of their colleagues—a clear indication there is a direct relationship between teachers' support, success, and job satisfaction.

Professional Learning Communities are another way for colleagues to build relationships with one another and for teachers to feel supported. McClure and Reeves (2004) shared teachers' opinions of having a poor sense of a professional community was one of the main reasons they left the profession. Professional Learning Communities provide a venue for teachers to work with curriculum, student data, collaborate on decisions, and implement job-embedded professional development. Breaden (2008) noted teacher attrition would be lessened if schools offered more teacher support and guidance in the areas of curriculum and professional development.

Helping retain teachers is being focused on in a school district near Philadelphia. Here, Allen and Penuel (2015) noted novice teachers are required to take professional development courses on classroom management, instruction, and classroom leadership. The principal at this school also meets, at least on a monthly basis, with the new teachers for open dialogue. These new teachers are also required to observe veteran teachers and to write reflections on their observations. This program greatly helped retain teachers in the Philadelphia school district (Allen & Penuel, 2015). Some schools provide teachers with the opportunity for professional development (Breaden, 2008). Rosenholtz and Simpson (1990) observed schools without professional growth and development opportunities for teachers will see an increase in teacher dissatisfaction. However, schools that do foster professional growth often see an increase in teacher commitment to the profession, a greater sense of professionalism, and more self-worth in teachers.

Collingridge (2008) found "teachers in schools which employ collaborative decision-making structures may feel sufficiently challenged and rewarded to mediate their stressful experiences" (p. 43). Professional Learning Communities can also help retention of teachers as they help curb isolation. Levine (2013) found alienation to be widespread within the teaching profession and Professional Learning Communities is an effective strategy to reduce isolation. Supportive principals, mentors, and Professional Learning Communities are vital to collegial support in education. Given the correct climate, any public district school might transform into a supportive and interactive school culture. Without question, these strategies, along with collaborative curricular planning and peer observation/mentoring programs have been found by McClure and Reeve (2004) to positively influence the retention rate of new teachers.

Theoretical Factors Related to Attrition/Retention

The Human Capital Theory

Shen et al. (2012) stated the human capital theory of professional choice suggests individuals always make methodical valuation of costs and benefits in entering and remaining in a profession. The two types of human capital include: specific human capital and general human capital. The probability of attrition decreases with an increase in specific human capital accumulation (or wealth). According to the theory moved forth by Elfers et al. (2006) "teacher attrition is higher in the early years of teaching when compared to midcareer teachers" (p. 99). Levine (2013) also observed the human capital theory as a factor in attrition. Therefore, new teachers are most likely to leave teaching profession than veteran teachers, given the difference in pay. The ultimate result is an increased likelihood of teacher attrition early in the profession.

Social Learning Theory

Social learning theory theorists assert to clearly understand the decisions of teachers to either persevere or exit teaching as a profession, it is essential to consider the following: the teacher's personality; initial commitment, educational experiences, professional assimilation into the profession of teaching, environmental influences, and career satisfaction levels (Loeb et al., 2005). Shen et al. (2012) found annual salary for all teachers and salary for senior teachers was positively correlated with teacher retention. They further placed forth "Substantial evidence that suggests wages play a role in retaining teachers" (Loeb et al., 2005, p. 46). Teachers who have more experience or more education tend to make more money, which affirms this theory related to higher paying teachers tending to stay in the profession.

Shen et al. (2012) conducted research on four groups of graduates with certificates in teaching who: left teaching, were intermittent teachers, never taught, and who taught continuously. The findings indicated these factors differed in these individuals (Shen et al., 2012). Based on the results, Shen et al. concluded the retention of teachers is most positively correlated with a teacher's social learning process. Shen et al. found a teacher's decision to stay in the field, and in the same public school district, was also positively associated with teachers' salary, and negatively associated with community wealth.

Maslow's Hierarchy of Motivations and Needs Theory

Abraham Maslow's hierarchy of needs theory was among the very first theories to identify desires and needs are believed to be significant to employees and people in general. Maslow published this theory in 1943 (Maslow, 1943), stating human beings have a hierarchy of wants or needs. Needs, according to Marston (2014), are necessities are biological and

psychological and urge an individual to work toward achieving a certain goal. There are three high-level human needs and four low-level humans. The four low-level needs in Maslow's 1943 hierarchy include the need for safety, survival, self-esteem, and belonging. As each one of these four lower needs is met, the motivation to fulfill them decreases. Until these needs are met, an individual will never move past these lower-level needs to higher-level needs. Self-actualization, aesthetic appreciation, and intellectual achievement are the three high-level needs of Abraham Maslow's 1943 hierarchy.

As opposed to the four-low level needs, when these three high-level needs have been met, the motivation to fulfill them further increases, rather than declines. Therefore, on Maslow's 1943 theory, individuals who are professionally successful continue to seek more ways in which they can become even more successful. These individuals will continue adding new goals and actively work towards attaining them; each new success level increases their drive. In this case, teachers are likely to stay in teaching because of motivations, which originate more intrinsically, rather than through rewards like monetary compensation, or extrinsic motivators (Herzberg et al., 2011; Marston, 2014).

Herzberg's Two Factor Motivation Theory

In their study, Herzberg et al. (2011) collected data from over 200 accountants and engineers in Pittsburg. They asked the respondents to give a description of a job occurrence, which normally causes extreme dissatisfaction and one that causes extreme satisfaction. Based on the data analysis, some of the factors caused satisfaction were associated with job content. For example, advancement, responsibility, work, recognition, and achievement were associated with job satisfaction. Alternatively, job dissatisfaction causes were associated with the work

environment. Examples consist of relationships with colleagues, work conditions, employee relationships with their employers, salary, technical support from administration, and company policy. Job dissatisfaction and satisfaction, according to Herzberg et al. (2011) were independently initiated and evaluated by two dissimilar sets of elements (Herzberg et al., 2011).

The findings by Herzberg et al. (2011) showed employees were externally motivated through superficial factors because they trusted the idea that by fulfilling these particular needs they would experience satisfaction. True motivators or intrinsic factors, on the other hand, served as the basis for true job satisfaction. Nevertheless, employees are likely to be dissatisfied with their work, in absence of extrinsic factors as well. This means employees are not necessarily only motivated by extrinsic factors, but rather these factors assist in eliminating dissatisfaction. Herzberg, just like Maslow, identified the greatest motivator is an employee's capacity for personal achievement. Moreover, according to Herzberg, through job enrichment, employers can ensure the greatest employee satisfaction levels (Herzberg et al., 2011).

Teacher Attrition/Retention in the United States and in Minnesota

The major focus of the public school system in any state in the United States is to offer a high-quality education to each student. For this to be attained there is need for an adequate supply of quality teachers both in elementary and secondary schools nationwide. School districts in the United States find it challenging to hire and retain professionals in the classroom, given there is continued increase in the numbers of students enrolling, as well as the numerous factors discussed throughout this literature review so far. In turn, this reduces the number of qualified teachers willing to enter in the teaching profession (Fisher, 2011).

Furthermore, and according to Marston (2014), elementary and secondary schools are being directed towards market norms, and away from social norms, through the implementation of performance-based pay and standards-based testing. In the United States, more money per student is spent as compared to any other country in western society (Marston, 2014). Marston (2014) dislikes this fact and asserts more money and more testing is not the best way in which to improve educational quality in United States. Likewise, he argued that an increase in administrative and teacher pay will only be a short-term solution (Marston, 2014). Marston suggested the only way to improve the quality of education is through directing more attention to policies supporting social standards in schools and greater consideration of teachers' wants and needs.

The school districts in both Minnesota and the United States as a whole are faced with the challenge of recruiting and retaining quality teachers. This is due to a number of factors, which include low salaries, lack of administrative support, poor working conditions, and poor relationships with colleagues. Increased teacher turnover is more prominent in high-poverty public schools than in low-poverty schools (Collingridge, 2008; Fitzgerald, 2007; Goodpaster, Adedokun, & Weaver, 2012; Schlechty & Vance, 2015). The finding has been a key issue for public districts in Minnesota, and has become even more prominent since the implementation of the 'No Child Left Behind Act.'

Clearly, school districts in Minnesota are currently facing the challenge of recruiting and retaining quality teachers, which plays a major role in academic success of students. Based on the study by Fitzgerald (2007), there is increased teacher turnover throughout all of Minnesota's school districts. Fitzgerald (2007) indicated over half of all public school teachers leave their

schools within their first five years of teaching. Over 15% of these teachers leave the teaching profession permanently after one year of teaching due to professional isolation and stress. This continuous replacement of professionally dissatisfied teachers lowers the educational quality in Minnesota, and places the school districts in a costly mode of continual hiring. Such a situation draws school resources away from classrooms and results in poor performance (Billingsley, 2004).

In Minnesota, similarly to the rest of the United States, the increased turnover of teachers is primarily among new teachers, who either transfer to other schools, or leave teaching as a profession permanently within their first five years of teaching. In the Minnesota Department of Education Supply and Demand Report (2013), the data showed the statewide attrition rate in Minnesota for 2011 was around 8%, with 4,224 teachers leaving their positions. The attrition rate for the same year in southwest Minnesota was 11%. The report indicated 33% of the teachers who were new to the profession in 2006-07 were no longer in the profession in 2011-12. The Minnesota Department of Education Supply and Demand Report (2013) also reported approximately 50% of the teachers who left the profession in Minnesota cited they were seeking better career opportunities with more job satisfaction and higher pay.

The state's Teacher Supply and Demand Report (Minnesota Department of Education, 2013) revealed Minnesota is experiencing critical licensure shortages in the following areas: special education, speech/language, mathematics, science, family and consumer science, and agriculture. This is due to the continuous retirement of qualified teachers in this field, new teachers leaving the profession, and smaller numbers of graduates being trained—particularly in

these subjects. Therefore, school districts in Minnesota faced with the problem of filling these positions and schools are at risk for granting students a poor education.

Summary

Based on the findings of all the studies in the literature review, it is clear teacher retention has been, and still is, a major issue in the public school districts. Significant numbers of schools experience the problem of recruiting and retaining quality teachers. According to several studies (Buckley et al., 2005; Halpert, 2011; Hughes et al., 2014; Locklear, 2010; Marston 2014), a teacher's decision to remain in teaching is influenced by numerous factors—including teachers' salaries, administrative support, working conditions, and collegial environment.

According to McClure and Reeves (2004), school districts have hidden costs are usually directed from tax payer and state support for new teacher preparation, most of whom leave the profession within the first five years of their teaching. The rate of teacher attrition is significantly greater in high-poverty public schools compared to low-poverty schools. The primary reason identified is poor working conditions. This condition often incorporates additional job responsibilities, unprofessional duties, unnecessary interruptions, lack of adequate and appropriate resources, lack of proper planning, excessive paperwork, lack of support from colleagues, and strained workplace condition (Hughes et al., 2014). As demonstrated by the National Commission on Teaching and America's Future (2003), the percentage of teacher attrition per year in low-poverty public district schools was 12%, versus 20% in high-poverty schools.

Public school districts in Minnesota, similar to any other state in the United States, are facing increased teacher's attrition influenced, in part, by the implementation of the "No Child

Left Behind Act." School districts are having a difficult time recruiting and retaining teachers in the classroom, especially in the secondary specialization areas, such as technology, science, and mathematics. In these particular subjects, there is an increased shortage of teachers due to the increased retirement of qualified teachers and few numbers of graduates being trained in these areas (National Commission on Teaching and America's Future, 2011).

Chapter III: Methodology

Introduction

The purpose of the quantitative study was to examine teachers' perceptions in Southwestern Minnesota school districts of school-associated factors related to attrition. More specifically, the study sought to determine if support from administration, working conditions, relationships with colleagues, and salary are perceived as having a significant influence on teacher attrition.

This study examined demographic factors (gender, teaching experience, teaching level, and education level) and teacher perceptions on school-associated factors related to teacher attrition by surveying teachers from southwestern Minnesota school districts. Teachers from these districts teach in school districts, which belong to the Southwest/West Central Service Cooperative, which is comprised of 56 public school districts. These 56 school districts serve over 50,000 students and employ over 7,500 teachers who are teaching under a license granted by the Minnesota Department of Education. A set of preliminary research questions has been developed to guide the study.

A Brief Overview of the Literature Related to Teacher Attrition Factors

In April 1983, the National Commission on Excellence in Education released the report *A Nation at Risk*. This report stated, "The educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future as a nation and a people" (U. S. Department of Education, 2004, para. 3). The report was the impetus for public education in the United States to prepare youth for work and responsible citizenship, to forge a common culture within an ethnically diverse country, and to reduce inequalities for the common

good of the nation (Present, 2010). The United States is struggling to remain economically dominant in a time when mathematic and reading test scores are not very competitive globally (Mathis, 2005). The United States. is not ranking competitively on international standardized exams and students today have a lesser capacity to compete globally (National Governors Association Center for Best Practices, 2010). Under performance has sparked several large-scale reforms including 'No Child Left Behind', the Reading First Initiative, and currently the Common Core State Standards. Pressures and demands on teachers are greater now than ever before in history (Magruder et al., 2013). Studying factors of why teachers choose to stay or leave is worthy of investigation as it influences student achievement (Shen et al., 2012). The research was used to examine several factors related to the attrition of teachers from the profession of education. There are limited studies on teacher attrition across the United States and no studies of teacher perceptions of factors related to teacher attrition in southwestern Minnesota schools.

Teacher attrition creates unforeseen stresses on school districts. Loeb et al. (2005) reported numerous schools with high attrition must use substitute teachers to fill positions. This causes instability for students as they experience a poor quality of teaching as substitute teachers lack the preparation for the teaching profession. Macdonald (1999) stated "the attrition of younger and more qualified teachers also affects the age profile and morale of those who stay" (p. 841). He addressed schools have had to cope with attrition by increasing class sizes, increasing teacher working hours, increasing their salaries proportionally—which can strain district finances, and the recruiting of other education professionals (Macdonald, 1999).

In addition to the concern about the annual attrition rate for all teachers, the even higher rate of attrition of beginning teachers has been particularly troubling to the field of education. Some studies revealed bright college graduates are less likely to enter the teaching profession and even if they do; they leave in a short period of time (Shen et al., 2012). According to the Teacher Follow-up Survey data for 2000-01, 8.5% of public school teachers with one to three years of full-time teaching experience left teaching employment annually, whereas 6.5% of teachers with four to nine years of experience left annually. Based on these data, the estimated rate of leaving during the first three years was 25.5%, during the first four years was 32.0%, and during the first five years was 38.5% (Boe et al., 2008). Shen et al. (2012) found when teacher attrition has been looked at over a period of time it follows a U-shaped curve. Their study found attrition rates are higher for younger teachers at the onset of their careers as well as for older teachers preparing for retirement. The one area the attrition rate slow is for middle-aged, middle-career teachers (Shen et al., 2012).

Shen et al. (2012) found in addition to salary, other school-related factors studied included teacher/student ratio, teachers' involvement in decision-making, administrative support, teaching level, student characteristics, and school location. Levine (2013) cited job dissatisfaction, primarily due to poor salary, poor administrative support, and student discipline problems (working conditions), as among the most frequent reason teachers give for leaving the profession. Retaining teachers is most closely and positively correlated with greater student/teacher ratios, when teachers have more autonomy in decision-making in educational practices, and having a supportive administration (Shen et al., 2012). The results from the 1994-

1995 Teacher Follow-up Survey for public school teachers indicated retirement only accounted for 27% of teacher attrition (National Commission on Teaching and America's Future, 2011).

Problem Statement

The United States is struggling to remain the economic leader in a time when mathematics and reading test scores are not globally competitive (Mathis, 2005). The United States lacks competitive rankings on international standardized exams and students today have a lesser capacity to compete globally (National Governors Association Center for Best Practices, 2010). Under performance has sparked several large-scale reforms including "No Child Left Behind," the Reading First Initiative, and currently the Common Core State Standards (Mathis, 2005). Pressures and demands on teachers are greater now than ever before in history and teacher attrition is a major problem (Magruder et al., 2013). Factors such as a teacher's choice to stay or leave a school, a certain district, or the profession entirely are worthy of investigation as these influence student achievement (Shen et al., 2012). However, there are limited studies on teacher attrition across the United States and no studies of teacher perceptions of factors related to teacher attrition. Gathered data regarding the perception of teachers on factors leading to attrition in southwestern Minnesota schools can serve as a representation of this phenomena occurring in the United States.

Research Purpose

The study examined rural teachers' perceptions of administrative support, working conditions, relationships with colleagues, and salary related to teacher attrition. The study examined the perceptions within a single region of the state of Minnesota by surveying teachers

in Southwestern Minnesota. The results of the study supplemented the gap in the literature related to teacher attrition in Minnesota.

In analyzing the perceptions of teachers, the data presented in the study provided knowledge of the extent, which administrative support, working conditions, relationships with colleagues, and salary influenced teacher attrition. The study provided administrators in school districts information needed to strengthen deficient areas or implement strategies aimed at retaining high quality teachers.

Research Questions

The study considered the following main questions to address the research problem:

1. What are the major demographic characteristics (including years of experience, education level, school size) of southwest Minnesota teachers?
2. How do select Southwestern Minnesota School District teachers report that salary, administrative support, relationships with colleagues, and working conditions would influence their decision to leave or consider leaving the profession or district in the future?
3. What relationships exist between the reported demographic characteristics and the reported workplace factors in relation to teacher attrition in southwestern Minnesota schools?

Research Design

The quantitative study used descriptive statistics to examine the contribution of the identified attrition factors (administrative support, working conditions, salary, and collegial relationships) as predictors of teachers of teacher attrition. Data from this non-experimental

study was analyzed to understand the relationships between the identified school-associated attrition factors and the dependent variable. Slavin (2007) noted, "a nonexperimental research design in which the researcher collects data on two or more variables to determine if they are related" (p. 83). The dependent variable in the study was the licensed teacher in southwestern Minnesota school districts.

Sample

The population addressed in this quantitative research consisted of current public school teachers in southwest Minnesota school districts. The school districts in the population were all regional members of the Southwest/West Central Service Cooperative, which is comprised of 56 public school districts and employs over 7,500 teachers.

A probability random cluster sampling method was used to determine the schools involved in this study. Vogt (2007) also referred to this method as an equal probability sample. Data for the study was collected randomly from 15 school districts in southwestern Minnesota, which are members of the Southwest/West Central Service Cooperative. A random number generator was used to identify the 15 school districts selected to take part in the study. Each of the 56 school districts, which are members of the Southwest/West Central Service Cooperative were placed in order based on 2015-16 school year enrollments and assigned a number. The districts were then divided into three enrollment clusters; 1-500 students, 501-1,000 students, and 1,001 or more students. The random number generator was set to generate seven numbers for each cluster. The first five numbers selected in each cluster identified school districts were asked to participate in the study and the subsequent two numbers identified those school districts

would have been selected as alternates in the cluster. Baruch and Brooks (2008) reported a typical response rate collected from participants is 52.7% with a standard deviation of 20.4.

Human Subject Approval

The quantitative study examined teachers' perceptions of the school-associated factors (administrative support, collegial relationships, working conditions, and salary) in relation to attrition. The data assisted the researcher to better understand teacher perceptions of reasons for possible attrition in southwestern Minnesota school districts. An informational research consent form was included in the Teacher Attrition Survey. The teachers who volunteered to participate in the study completed a 4-point Likert scale survey, which was emailed to them from their respective district Superintendent who received the survey from the St. Cloud State University Statistical Consulting and Research Center. The identities of the teachers who completed the survey were not collected, although the survey collected minimal demographic data (years of teaching, gender, age, and education level). Participants did not receive any benefits for taking part in the study and the researcher did not have any influence on the responses.

Instrumentation

The approach used was a descriptive quantitative non-experimental method conducted through surveys of 15 southwestern Minnesota school districts. The teacher attrition survey used for the study was created to address the specific research questions, later correlated with the literature review. The survey was developed by analyzing similar surveys used by doctoral students and professionals to study attrition and retention rates of teachers. The instrument used for the study was consistent with three different studies conducted on teacher attrition. The first was a survey created by Mark George Makovec (2008) in his dissertation, *A Study of the Factors*

Predicting Attrition and Contributing to the Attrition Rate of High School Teachers in Hampton Roads, Virginia. The second was a survey created by Fantara J. Houston (2009) in her dissertation, *Teacher Perceptions of the Factors which Influence Teacher Attrition in Three Elementary Schools in a Metropolitan Atlanta School System.* The third was a survey created by Tina M. Locklear (2010) in her dissertation, *Factors Contributing to Teacher Retention in Georgia* used to develop the survey instrument for the study.

An online survey instrument was used for the study because of the large geographic area of the Southwest/West Central Service Cooperative public school districts. Bhattacherjee (2012) shared, "survey research is also ideally suited for remotely collecting data about a population that is too large to observe directly" (p. 73). Survey research has been found to have various strengths when compared to other methods of research. Bhattacherjee (2012) reported surveys are an excellent way for measuring and gathering unobservable data, such as perceptions or beliefs. Rea and Parker (2014) noted surveys allow participants to complete them in a timely manner, provides a sample of the population, and is replicable. Bhattacherjee (2012) reported surveys also allow data to be analyzed using multiple variables and allow the researcher to do this in an efficient and cost effective manner.

The teacher attrition survey instrument (Appendix B) used in this research contained randomly ordered questions (items) focused on the four causes (administrative support, working conditions, salary, and collegial relationships) related to teacher attrition. The survey instrument ensured a higher validity by not using headings for the four causes. This was done so as not to provide an influence opportunity for the participant. For example, if a participant was aware that a question was related to a specific factor, he or she might have responded with bias, thus

affecting the validity of the data collected. The researcher gathered data through a Survey Monkey online survey instrument administered by the St. Cloud State University Statistical Consulting and Research Center. The survey was disseminated to all teachers of the school districts in the Southwest/West Central service cooperative randomly selected for the study.

The survey questions were piloted with teachers who worked in the same district as the researcher, although they were not actual participants in the study. The purpose of the pilot was to verify if indeed the survey questions are eliciting the quality and quantity of responses desired in response to the questions. Additionally, the researcher shared the instrument with a doctoral cohort to ensure content accuracy and validity. The cohort members reviewed the survey instrument items and provided feedback for improvement. Feedback was used to modify and refine the survey instrument. The modifications were made to ensure clarity of the questions and the information collected was accurate to the study.

When administering the online instrument, the researcher created a database of superintendent email addresses from the randomly selected districts within the Southwest/West Central Service Cooperative. The St. Cloud State University Statistical Consulting and Research Center emailed the survey link to the researcher who in turn shared the link with the district superintendents. The district superintendents forwarded the link to all teachers within their school district.

Data Collection

Data collection began in October 2016. Roberts (2010) noted, given the typical school calendar, the best time to collect data is October through November and January through April. In October, an online survey link was emailed to the researcher by the St. Cloud State University

Statistical Consulting and Research Center. The researcher shared the survey link with the district superintendents of the selected districts. The district superintendents forwarded the link to all teachers within their district beginning on October 3, 2016. The population of licensed teachers who received the survey link were teachers in districts whose superintendents granted permission for the district to take part in the study. All members of the population within the selected districts were asked to complete the survey. An introductory letter in the email to the superintendents described the purpose of the research (Appendix A). Participants were assured their personal identity or school district identity were not be released and confidentiality was maintained. A follow-up reminder email (Appendix C) from the researcher was sent out one week and two weeks after the original email was sent. This was recommended by Roberts (2010) to improve the overall response rate.

The participants were instructed to use an interval scale of 1 through 4, the extent to which the factor (item) mentioned in each question would cause them to leave the teaching profession. A response of 1 indicated the teacher strongly disagreed the school-associated factor would not cause the teacher/teacher peer to leave the profession; a response of 4 indicated the teacher strongly agreed the school-associated factor would cause the teacher/teacher peer to leave the profession. The data contained the four predictive causes (administrative support, working conditions, salary, and collegial relationships) along with variables related to years of teaching, age, gender, and education level are used. The survey also instructed respondents to rate their intent to leave teaching by rank ordering the four predictor causes researched in this study.

Data Analysis

After the data were collected, the survey results were analyzed to determine relationships of teacher perceptions of factors related to attrition. All the responses were reviewed by the researcher. An analysis of the data for the research was completed using quantitative descriptive statistics. The Statistical Package for the Social Sciences (SPSS) was used for the analysis.

Chapter IV: Results

Introduction

The retention of public school teachers has been an issue of continuing concern in education (Locklear, 2010). According to the United States Department of Education (2004), in 2001-02, there were approximately three million teachers employed in public schools in the United States. Approximately 75% were female, and 84% were white (United States Department of Education, 2004). These teachers served a student population of approximately 47 million students, which is growing increasingly diverse (Present, 2010). From 1986 to 2001, the percentage of white students in United States public elementary and secondary school classrooms declined from 70.4% to 60.3%, while the percentage of African-American students increased from 16.1% to 17.2%, and Hispanic students increased from 9.9% to 17.1% (United States Department of Education, 2004). Changing demographics made teaching more challenging as there was pressure to ensure all students fulfilled the mandates established by the "No Child Left Behind" statute and the ensuing Common Core State Standards (Magruder et al., 2013).

In addressing the problem of teacher retention for the benefit of students, the quantitative study examined teachers' perceptions of school-related dynamics affecting attrition in rural southwestern Minnesota school districts. More specifically, the study sought to determine if support from administration, working conditions, relationships with colleagues, and salary were perceived as having a significant influence on teacher attrition.

Research Purpose

The study examined rural teachers' perceptions of administrative support, working conditions, relationships with colleagues, and salary related to teacher attrition. The study examined the perceptions within a single region of the state of Minnesota through surveying teachers in select school districts of southwestern Minnesota. The results of the study supplement the gap in the literature related to teacher attrition in Minnesota.

In analyzing the perceptions of teachers, the data presented in the study provided information about the extent to which administrative support, working conditions, relationships with colleagues, and salary impacted teacher attrition. The study furnished administrators in school districts with information, which may be of value in strengthening deficient areas or implementing strategies aimed at retaining high quality teachers.

Research Questions

The study focused on three research questions and the data were analyzed and findings reported accordingly. The research questions were:

1. What were the major demographic characteristics (including years of experience, years in current district, education level, school size, and gender) of southwest Minnesota teachers?
2. How did select southwestern Minnesota school district teachers report salary, administrative support, relationships with colleagues, and working conditions influenced their decisions to leave or consider leaving the profession or district in the future?

3. What relationships existed between the reported demographic characteristics and the reported workplace factors in relation to teacher attrition in select southwestern Minnesota school districts?

Analysis of data was completed at the St. Cloud State University Office of Statistical Analysis using the Statistical Package for the Social Sciences (SPSS).

Description of the Sample

The sample group for the study was 1,275 public school teachers from 15 randomly selected school districts which were members of the Southwest/West Central Service Cooperative. The superintendent from each selected district agreed to allow their teachers to participate in the study. Superintendents each submitted a signed agreement affirming their district's willingness to participate in the study (Appendix E). An electronic survey from the researcher was distributed to each participating district superintendent who forwarded the link to the licensed teachers within their school district. Licensed teachers in participating school districts were encouraged to complete the study survey.

The survey consisted of three sections (Appendix B). The first section of the survey gathered information on teacher demographics including; gender, years of teaching experience, years taught in the current school district, district enrollment, and the highest degree attained. The second section of the survey focused on select attrition measures (items). Each of the attrition measures (items) directly reflected one of four main causes for teacher attrition identified by an examination of the literature. The third section of the survey asked teachers to rank each of the four main causes for attrition in their perceived order of importance.

The number of teachers in the 15 school districts who responded to the survey totaled 624 (n=624) for a 48.9% response rate. Of these, 548 (n=548), or 42.9% were considered valid responses. Surveys with all the questions answered were determined as valid.

Research Question 1

What were the major demographic characteristics (including years of experience, years in current district, education level, school size and gender) of southwest Minnesota teachers?

In order to analyze Research Question 1, the researcher compiled participant responses to Questions 2-6 on the survey. The data from these responses are presented in Tables 1-5 (Appendix F). Of the 1,275 public school teachers invited to participate in this survey, 548 responded. Of those who responded, 385 or 70.3% were female and 163 or 29.7% were male.

Table 2 (Appendix F) reports the total years of teaching experience completed by the survey participants. Slightly more than half of all respondents, 277 or 50.5% had completed teaching 16 or more years in the profession. A total of 96 respondents or 17.5% reported having completed 16 to 20 years of teaching, while 181 or 33.0% respondents reported having completed teaching for 20 or more years. The data also revealed that 7.7% of respondents had completed two years or less in teaching.

Table 3 (Appendix F) reports the total years of teaching experience respondents had completed in their current school districts. Table data illustrated that survey respondents were relatively evenly distributed across the six teaching experience categories. The number of respondents who completed zero to two years of teaching was 111 or 20.3% while 98 respondents or 17.9% reported they had completed three to five years or more than 20 years of teaching. Those respondent categories with the fewest participants were 6-10 years of

experience teaching (n=93, 17.0%); 16 - 20 years (n=86, 15.7%); and 11 - 15 years (n=62, 11.3%).

Table 4 (Appendix F) reports the number and percentage of students enrolled in the school districts participating in the study. Of the 548 public-school teachers who responded to the survey, 30.8% (n=169) reported they taught in a district with an enrollment of 501 to 1,000 students, while 18.4% (n=101) reported they taught in a district with an enrollment of over 1,501 students.

Table 5 (Appendix F) reports the highest degree obtained by the survey respondents. The data showed a majority of teachers who responded to the survey had obtained a masters' degree. Of the 548 respondents, 46.5% (n=255) had obtained a master's degree, while 45.1% (n=247) recorded a bachelors' degree was their highest degree. Forty-six respondents or 8.3% reported having a specialist or degree higher than a master's degree.

Research Question 2

How did select southwestern Minnesota school district teachers report salary, administrative support, relationships with colleagues, and working conditions influenced their decisions to leave or consider leaving the profession or their districts in the future?

The second section of the survey focused on select attrition measures (items). Each of the attrition measures (items) was directly aligned to one of four main causes of teacher attrition as identified in the literature. The third section of the survey asked the respondents to rank each of the four main causes for teacher attrition in their perceived order of importance.

Section 2 (Question 8) of the survey presented 16 measures (items) aligned to the four attrition causes. Each of the 16 measures (items) was linked to one of the four causes of attrition

as cited in the literature. A Likert scale was used for the participant to rate each item: (1) Strongly Disagree this item would result in the respondent leaving or consider leaving the school or teaching profession, (2) Disagree this item would result in the respondent leaving or consider leaving the school or teaching profession, (3) Agree this item would result in the respondent leaving or consider leaving the school or teaching profession, (4) Strongly Agree this item would result in the respondent leaving or consider leaving the school or teaching profession. Four of the 16 measures (items) were intended to align to each one of the causes as follows:

Salary

4. Salary lower than peers with a similar degree in another profession
6. Poor/inadequate benefits package
11. No regular raises or salary advancement
16. Salary lower than peers with similar education and experience in a neighboring district

Working Conditions

3. School facility and/or classroom in disrepair
5. Major student discipline problems
10. Teachers feel threatened by voicing opinions
15. Teaching load or class size not conducive to teaching and learning

Relationships

2. Insufficient/Ineffective staff development opportunities
7. Lack of mentoring or induction program
8. Lack of time for collaboration within grade level or department (e.g. Professional Learning Community)
14. Teachers not maintaining meaningful professional relationships with one another

Administrative Support

1. Lack of support/guidance of building administrator(s)
9. Administrator is intimidating during observations and provides little feedback
12. Not being treated with professionalism/respect by administration
13. Administration not involving teachers in decision-making

To test the reliability for these 16 items, Cronbach's alpha was computed and yielded a value of 0.876. In this context, reliability refers to the expectation of securing similar results on the survey if administered to a similar group of subjects (Table 6, Appendix F). Cronbach's alpha is a statistical measure based on all possible inter-item correlations and ranges in values from zero to one. A value of 0.70 is considered to be acceptable (Duckworth & Yeager, 2015).

Correlations for the Likert-type items are presented in Table 7 (Appendix F). One expectation was there would be some moderate to strong correlations between items were designed to measure the same causes of attrition. For items about salary, the correlations were acceptable, ranging from 0.468 to 0.680. The strongest correlation was found between the two items: salary lower than peers in other professions and salary lower than peers in a nearby school district. For the working conditions cause, the correlations ranged between 0.331 to 0.440, all moderately strong and reasonable, considering the items for working conditions were not as specifically focused as the salary items. Also of interest was how these items were correlated with items making up the administrative support causes of attrition.

The items for relationships as a cause for attrition had correlations ranging from 0.305 to 0.590. Lack of time for collaboration was moderately correlated with lack of mentoring (0.305) and was correlated at 0.590 with lack of relationships among teachers.

Lack of administrative support seemed to be a strong indicator of attrition. The correlations among the four items ranged from 0.617 to 0.768. It should be noted that any correlations are stronger than 0.8 would indicate measure were too related, is, likely measuring the same things. To secure a better understanding of how well each item relates to the four causes of attrition an exploratory factor analysis was conducted.

Factor analysis reveals if the individual items of the survey measure the "factors" of interest— is, do the items align with the four attrition causes they are intended to measure (Matsunaga, 2010). Factor analysis is a useful tool for investigating variable relationships for complex concepts such as socioeconomic status, psychological scales, or causes of teacher attrition. Researchers can investigate concepts not easily measured directly by collapsing a large number of variables into a few interpretable underlying factors. Exploratory factor analysis was conducted in SPSS. Tables 8 through 10 report the results of the analysis. Table 8 (Appendix F) provides results for tests of the appropriateness of factor analysis. KMO is a measure of sampling adequacy and an acceptable value should be at least 0.60. KMO=0.873 indicates sampling adequacy where sample refers to the number of items—16—not the number of respondents. Bartlett's test of sphericity is another test of the correlations in the data; the significance of the test revealed the data was suitably correlated.

The table of communalities (Table 9, Appendix F) displays the proportion of variance accounted for in each variable by the remaining variables (Initial). As an example, the percent of the variance in the response to "salary lower than peers with a similar degree" (58.1%) was accounted for by the rest of the measures. Extraction communalities are estimates of the variance in each variable accounted for by the factors in the factor solution. Small values indicate variables do not fit well with the factor solution, and should possibly be dropped from the analysis. The extraction communalities for this solution are acceptable, although the lower value for "facility in disrepair" reveals it does not fit as well as the other variables. Table 10 shows the pattern matrix from the factor analysis. The pattern matrix was designed to provide a clearer ability to identify the patterns in the data.

According to the factor analysis, overall, the sixteen items (questions) fit the attrition factors or causes quite well. Therefore, the survey items address the causes of attrition the study seeks to understand. The use of Likert-type questions (e.g., disagree strongly through agree strongly) created statistically valid summary variables. The resulting summary variables were four Likert-scale measures. They were treated as interval (continuous) data allowing tests compare the means of different groups. Question 9 of the survey asked for teachers to rank the reasons from least likely to most likely, which would cause them to leave the school or profession. In order to examine the relationship between means of the ranked attrition causes and the summary attrition factors a series of simple one-way ANOVAs were employed. Table 11 (Appendix F) shows the means for the summary attrition measures and the medians and modes for the rankings.

Graphs 1 through 4 (Appendix G) display the rankings for each of the four attrition causes by percentage of respondents. The analysis determined an even distribution of salary factor (Graph 1) between the possibilities from least likely to most likely (least=26.1%, somewhat=24.0%, likely=24.0%, most=25.9%). According to Graph 2, 57.4% of respondents ranked working conditions as a likely or most likely cause for attrition (least=17.3%, somewhat=25.3%, likely=29.6%, most=27.8%).

Graph 3 (Appendix G) shows relationships are the least significant for attrition of all the causes (least=39.4%, somewhat=25.3%, likely=20.3%, most=15.0%). Administrative support ranks the most highly as a cause of teacher attrition (Graph 4) with 31.3% listing it as the most likely (least=17.3%, somewhat=25.3%, likely=26.1%, most=31.3%).

To develop a better idea of the relationship between the items summary measure and the rank measures Graphs 5 through 8 were created. Graph 5 (Appendix G) shows the relationship for the salary measure. Within any ranking of salary, respondents had varying degrees of agreement on the different salary items. However, the means are lowest for the "least likely" rank and highest for the "most likely." The other items can be examined in a similar fashion. Graphs 6 and 8 (Appendix G) established more respondents ranking working conditions and administrative support factors as "likely" or "most likely." Similarly, the relationship measure in Graph 7 (Appendix G) reflects Graph 3 with relationship being the least likely cause of attrition.

These graphs help to understand the relationship between the rank and the items summary measures for the same attrition factor. The ANOVA results aided in understanding the interplay between the different factors.

Results for the ANOVA of the mean item measures versus the salary rank are shown in Table 12 (Appendix F). This shows there are differences in the mean items measures for salary, working conditions and administrative support by the ranking for attrition due to salary concerns. In a similar fashion, Tables 13 through 15 (Appendix F) show the ANOVA results for rank of working conditions, relationships with colleagues, and administrative support. Of interest in Table 13 was the lack of significance between the working conditions rank and the relationships with colleagues mean measure.

From the factor analysis and examining the ranking measures, it appears relationships between colleagues was the least strong measure of attrition. In Table 14, the ANOVA results for the relationship with colleague's rank, there is a significant overall relationship between the salary mean and the working conditions mean ($p=0.000$ and $p=0.002$, respectively). The

contrasts, constructed as before, show as the rank mean of relationship with colleagues increases (the more likely to be a factor for attrition), the means for the salary and working conditions means decrease. The lack of significance for relationship with colleagues and administrative support indicate how the respondents ranked relationship as an attrition factor has no impact on the agreement or disagreement with statements about relationships with colleagues or administrative support.

Finally, examining the administrative support rank mean against the four item summary measures, the results are shown in Table 15. In this instance, the ranking measure was apparently significant with all of the mean attrition factors.

In total, what has been found was the respondents' rankings of attrition causes and the summaries of the 16 items about specific reasons align well with each other—as the rank increased from "least likely" to "most likely" so did the mean of the item summary measures, a higher value indicating more agreement with the likelihood of attrition. The exception was the relationship factor. However, re-examining Graphs 4 and 7 show first, relationships with colleagues was ranked in the survey as the least likely attrition factor by most respondents and secondly, the range of the mean response was very narrow, implying most respondents answered the relationship items in a similar fashion. (Table 11 in Appendix F shows the overall means for each cause of attrition).

Overall, administrative support emerges as the most important factor in possible attrition followed by working conditions, salary/benefits and finally, relationships with colleagues.

Research Question 3

What relationships existed between the reported demographic characteristics and the reported workplace factors in relation to teacher attrition in select southwestern Minnesota school districts?

Overall, demographic factors do not seem to have a major impact on how teachers rate the importance of the attrition factors. To examine the relationship between the demographic measures and the attrition factors another series of simple one-way ANOVAs were computed.

Table 16 (Appendix F) reports the results for respondent gender compared to each of the measures. Women had higher overall average means compared to men for both factors (2.38 vs. 2.22 and 2.95 vs. 2.75, respectively). The data revealed there was a difference between responses from men and women on the relationship summary and the administrative support summary with women agreeing more strongly than men do.

For the experience gained based on the number of years teaching, only the salary measure was shown to be significant in a one-way ANOVA (Table 17, Appendix F). Subsequently t-tests were conducted, as shown in Table 18 (Appendix F), grouping years of teaching experience into two groups. The t-tests were not statistically significant for any of the measures indicating length of time spent teaching was not a primary consideration in attrition.

Table 19 (Appendix F) displays the results for years in current district and none of the comparisons were found to be significant. Therefore, total years teaching could be assumed to be more important to attrition than time in the current position.

Table 20 (Appendix F) presents the results for school enrollment compared to the four summary attrition measures: salary, working conditions, relationships, and administrative

support. The data showed working conditions and administrative support play a role in attrition dependent on school size. Multiple comparisons revealed means for the working conditions measure differ statistically for school sizes 1-500 and 501-1000 compared to school size of 1001 to 1500. The mean for the importance of working conditions as an attrition factor was higher for enrollment from 1001-1500 than for those below. On the other hand, when enrollment surpassed 1500, the mean for importance of working conditions as an attrition factor went down. For enrollment compared to the administrative support measures, there was a significant difference between enrollments of 1001-1500 and those 1501 and over. Again, the mean of administrative support was highest for enrollment 1001 to 1500 and then drops for the highest enrollment level.

Table 21 (Appendix F) presents data on the comparison of highest degree attained and the four factors. Data which supported only the administrative support factor was related to the degree attained. A logical contrast was between the bachelor and master's degree levels—Table 5 shows only 46 respondents have a degree beyond master. In this case, the contrast result shows salary appears to be significant with the respondents' degree. In order to clarify the results a t-test was conducted which grouped master's degree and higher education levels and compared the group to the bachelor's degree. Table 22 (Appendix F) reports the results and showed the difference for the salary measure persists though the differences were small. To understand the apparently contrary results more fully, the means for each of the four measures at each level of degree are shown in Table 23 (Appendix F).

It appeared there was a significant relationship between administrative support and degree attainment. It may be concluded the means for specialist and sixth year respondents as well as doctoral respondents are different from master's and bachelor's level respondents though

conclusions must be drawn with caution since there are so few observations at these higher levels compared to the overall sample.

Summary

The study examined rural teachers' perceptions of administrative support, working conditions, relationships with colleagues, and salary related to teacher attrition. Chapter 4 presented the results of statistical analysis of the study data. The number of teachers within the 15 school districts who responded to the survey totaled 624 (n=624) for a 48.9% response rate. Of these, 548 (n=548), or 42.9% were considered valid responses. By gender, 385 or 70.3% were female and 163 or 29.7% were male. Slightly more than half of all respondents, 277 or 50.5% had completed 16 or more years of teaching with 181 or 33.0% respondents reported having completed teaching for 20 or more years. Of the 548 respondents, 46.5% (n=255) had obtained a master's degree, while 45.1% (n=247) recorded a bachelors' degree was their highest degree. Respondents teaching in a district with an enrollment of 501 to 1,000 students numbered 169 or 30.8%, while 18.4% (n=101) reported they taught in a district with an enrollment of over 1,501 students.

The remainder of the survey focused on select southwestern Minnesota school district teachers' decisions to leave or consider leaving the profession or their districts in the future and how salary, administrative support, relationships with colleagues, and working conditions influenced those decisions. Cronbach's alpha and an exploratory factor analysis showed the survey is a reliable instrument and the measures are valid. The process of factor analysis produces factors by the importance of the underlying measures, which revealed lack of

administrative support was the main cause of attrition, followed by salary, relationships with colleagues and working conditions (Matsunaga, 2010).

Respondent ranking of attrition causes was largely consistent with the summary produced by the factor analysis. Administrative support was ranked most likely to cause attrition by 167 respondents or 31.3%, followed by working conditions with 148 respondents or 27.8%, salary for 138 (25.9%) and finally relationships with only 15% or 80 respondents feeling relationships were the most important cause for attrition. Overall, demographics do not seem to have a major impact on how teachers rate the importance of the attrition causes. However, both administrative support and salary show some relationship with highest degree obtained with those having attained a master's agreeing more strongly that these causes are drivers of attrition. Chapter V presents the conclusions derived from these findings.

Chapter V: Summary

The study examined teachers' perceptions of the impact of administrative support, working conditions, relationships with colleagues, and salary on teacher attrition. This study examined the perceptions within a single region of the state of Minnesota by surveying teachers in southwestern Minnesota. The results of the study supplement the gap in the literature related to teacher attrition in Minnesota. In analyzing the perceptions of teachers, the data presented in this study provides knowledge of the extent administrative support, working conditions, relationships with colleagues, and salary influence teacher attrition. The study provides school district administrators with information, which can assist them in implementing strategies to retain high quality teachers. Overall, the data show a majority of the teachers / respondents had obtained a masters' degree as their highest degree. Furthermore, administrative support emerges as the most influential factor in possible attrition followed by working conditions, salary/benefits and finally, relationships with colleagues. Demographic factors did not seem to have a major impact on teachers rating of the importance of the attrition factors, with the possible exception of district enrollment. This chapter provides overall conclusions to the study, a discussion about the findings, existing limitations, and further recommendations for practice and future research. The following research questions were the focus of the study:

1. What are the major demographic characteristics (including years of experience, education level, school size) of southwest Minnesota teachers?
2. How do select southwestern Minnesota school district teachers report salary, administrative support, relationships with colleagues, and working conditions would

influence their decision to leave or consider leaving the profession or district in the future?

3. What relationships exist between the reported demographic characteristics and the reported workplace factors in relation to teacher attrition in southwestern Minnesota schools?

Research Question 1

In examining the data and findings related to Research Question 1, of the 548 public school teachers who responded to the survey, 30.8% reported they teach in a district with an enrollment of 501 to 1,000 students while 18.4% reported they teach in a district with an enrollment of over 1,001 students. Table 5 reports the highest degree obtained by the survey respondents. The data show a majority of the teachers / respondents had obtained a masters' degree as their highest degree. Of the 548 respondents, 46.5% had obtained a master's degree while 45.1% reported that a bachelors' degree was their highest degree. Slightly over 8%, or 46 respondents, reported having a specialist or other degree higher than a master's. These findings suggest lesser possibility for teachers having earned a masters' degree to leave the profession.

Level of Teacher Education

In their research, Adams and Dial (2000) noted additional academic degrees do make a difference in mitigating teacher attrition. Adams and Dial wrote, "The reasoning is that, since teachers with additional degrees have a greater investment which they might lose if they switched careers, these teachers will remain in teaching longer" (p. 359). The work done by Adams and Dial also suggested teachers with master's degrees are typically 32% less apt to leave the profession then the 68% of teachers with only bachelor's degrees. This information relates

well to what has been found from the data correlated in the study as well. Here, the data revealed not only did the majority teachers who responded to the survey have master's degrees, but, slightly over 8% also reported having a specialist or other degree even higher than a master's. Taken as a whole, the findings from the literature and from the study suggested teachers having earned a masters' degree are less likely to leave the profession. Finally, it appeared administrative support is related to the degree attained when analyzing the findings for teachers with master's degrees. However, there were so few observations at the higher levels of education beyond the attainment of a master's degree, caution must be taken in making conclusions.

Research Question 2

The examination of the data and findings related to research questions number two, revealed an alignment of the rankings from survey question 9 and the mean summaries of the survey question 8 items for the same attrition factor—as the rank increased from least likely to most likely so did the mean of the measure. The exception is the relationship with colleagues factor. However, re-examining graphs 4 and 7 show relationships with colleagues ranked as the least likely attrition factor by most respondents. Further, the range of the mean response is very narrow, implying that most respondents answered the relationships with colleagues' items in a similar fashion. (Table 11 shows the overall means and medians for each factor and rank of the factor). Overall, administrative support emerges as the most important factor in possible attrition followed by working conditions, salary/benefits and finally, relationships with colleagues

Administrative Support, Working Conditions, Salary/Benefits, and Relationships

The four attrition factors of administrative support, working conditions, salary/benefits, and relationships with colleagues were shown to correlate with teacher attrition in both the literature reviewed and for the original findings of the study. The study by Houston (2009) cited the major reasons for attrition included low salary, lack of support from administration, and unfavorable working conditions. Shen et al. (2012) posited the school-associated factors influenced teachers' decision to either stay or leave the classroom include the location of the school, the characteristics of the students, the teaching level, administrative support, teachers' engagement in school decision-making, and the student/teacher ratio. The retention of teachers, based on a number of studies, positively related with adequate administrative support, more teacher engagement in school decision making, and a smaller student/teacher ratio (Halpert 2011; Buckley et al., 2005; Halpert, 2011; Houston, 2009; Marston, 2014 Shen et al., 2012; Waddell, 2010). While pay was considered one of the major conditions for attrition, it appeared administrative support was the most outstanding condition for teacher attrition.

Administrative support. Throughout the study, the support from administration has been cited as a key factor which influenced teacher attrition; lack of support from administration led to high teacher attrition (Schlechty & Vance, 2015). This factor of teacher attrition has been verified in the literature and in the findings from the study. In their work, Buckley et al. (2005) emphasized administrative support for teachers is the major influence on a teacher's decision to stay in a particular school and in the field in general.

Further review of the literature found teachers who are asked to take part in the decision-making process in their schools felt more involved and committed to their jobs (Bogler, 2001).

According to Collingridge (2008), school administrators had strong influence over the stress level teachers' encounter. This is often due to lack of rewards and recognition from management, allowing teachers to feel less important and unsupported. Billingsley (2004) found overall teacher satisfaction created a desire to stay in the profession was directly associated with having support from leadership, and facilitated lower levels of role conflict and pressure. As noted in the review of the literature and based on the North Carolina Teachers Working Condition Survey (2004), a positive collegial school environment, along with supportive leaders, is the most important factor in a teachers' decision to remain in the profession.

Although administration can mean any number of school personnel, frequently administrative support referred to the principal. Hughes et al. (2014) noted it is critical for the principal to provide multi-levels support in environmental, instructional, technical, and emotional areas to improve teacher retention. Furthermore, the more teachers perceived their principal to be a transformational leader, the greater the job satisfaction (Bogler, 2001). These findings positively correlate with the data gathered and analyzed in the study. The contrast between the least and most likely administrative support, which ranked ($p=0.002$), a positive relationship. It should be noted the mean of administrative support is highest for district student enrollment of 1001 to 1500 and drops for the highest enrollment level of at least 1,501 students. The reason for this is not immediately clear and warrants further research. Overall, all the findings illustrated if administrative support of teachers was in evidence, teachers were encouraged to continue teaching—thus increasing teacher retention (Schlechty & Vance, 2015).

Working conditions. Poor working conditions, the second highest ranking attrition factor discovered in the study, were a key component of teachers' dissatisfaction with the

profession. This often included areas involving, but not restricted to, job responsibilities, duties, unnecessary interruptions, availability of resources, lack of proper planning, excessive paperwork, lack of support from colleagues, and general workplace conditions (Hughes et al., 2014). From what was gathered in the literature review, working conditions determined a teacher's decision to remain in a teaching position. Based on several surveys conducted by different researchers, a significant proportion of public school teachers have often stated working conditions were one of the key reasons why they leave teaching as a profession Buckley et al., 2005; Fisher, 2011; Halpert, 2011; Houston, 2009; Hughes et al., 2014; Locklear 2010; Marston, 2014).

Locklear (2010), who conducted the North Carolina Teacher Working Conditions Survey, indicated working conditions served as a major factor in both student and teacher retention. In the United States, North Carolina was the first state to address the retention of teachers when considering teachers' perspectives (Locklear, 2010). Considering teachers' perspectives was accomplished by the creation of initiatives by the North Carolina Governor to assess teachers' working conditions to improve the rate of teacher retention within their State's public schools (Locklear, 2010).

In readdressing the work of Macdonald (1999) and Wildwood et al. (2015), the condition in which an individual works usually affected his/her performance. In turn, this determined the kind of satisfaction teachers acquired from their work. For instance, when teachers felt unsatisfied, disrespected and demoralized, their morale was negatively affected. Ultimately, this affected their work performance. Some of the morale issues were brought on by factors as seemingly inane as needing more supplies in the classroom. Buckley et al. (2005) conducted

interviews of public school teachers in New York City in the 1990s and a significant number of teachers reported they did not have access to basic supplies. Often, they used their own funds to equip their classroom. Teachers also reported they did not have enough textbooks or "the textbooks they did have were in poor condition and that since the school copying machines were frequently broken they had to rely on private resources to reproduce classroom materials" (Buckley et al., 2005, p. 1110). These particular conditions were very common in both rural communities and in low-income schools and greatly affected a teacher's willingness to continue teaching (United States Department of Education, 2004).

Facilities were an important part of working conditions in schools because most, if not all, teaching takes place in schools (Macdonald, 1999). As such, the "quality of that location can affect the ability of teachers to teach, teacher morale, and the very health and safety of teachers" (Buckley et al., 2005, p. 1111). Buckley et al. (2005) also contended factors such as indoor air quality, thermal comfort, and lighting can affect student achievement, student and staff health, and teacher performance. Buckley et al. further noted "17 studies from the mid-1930s to 1997 found appropriate lighting improved test scores, reduced off-task behavior, and played a significant role in the achievement of students" (p. 1112). Public school teachers emphasized their ability to control classroom temperature and lighting as critical to not only their performance, but of their students. A 1999 study by the Heschong Mahone Group (Heschong, 2002) covering more than 2,000 classrooms, indicated the students with the most classroom daylight progressed faster and higher in math and reading in one year as compared to students who learned in classrooms with the least amount of daylight (Buckley et al., 2005).

In relationship to the topic of salary, Buckley et al. (2005) stated teachers' salary is not all matters in making decisions on matters regarding retention; school working condition also played a significant role. Based on their findings, teachers might willingly work for lower salaries as long as the working conditions were considered good. The study found working conditions were more important than salary, given working conditions ranked number two in importance for retaining teachers. Data from the study on the working conditions factor found correlations ranged from 0.331 to 0.440, all moderately strong.

Finally, working conditions correlated positively with administrative support. The data found working conditions and administrative support played a role as a factor in attrition dependent on school size. A contrast compared district student enrollment up to 1000 to enrollments over 1000 were not significant, showing the relationship is a little more complex. Multiple comparisons, following the initial ANOVA, revealed means for the working conditions measure differed for school sizes in districts from 1-500 and 501-1000 compared to 1001 to 1500. The mean for working conditions was higher for enrollment from 1001-1500. On the other hand, when enrollment was over 1500, the mean for working conditions went down. This suggested working conditions were most important to teacher attrition in schools where the enrollment was 1001-1500. This too warrants further research in the future.

Salary/benefits. From a review of the literature and the findings in the study, salary is a major issue when considering teacher attrition and retention. Gallo and Beckman, (2016) argued increasing teacher salaries was the most significant and effective way to reduce attrition

In multiple studies researchers' found a teacher's salary was the major determinant of public school teachers' decision to remain in the profession (Buckley et al. 2005; Fisher, 2011;

Halpert, 2011; Houston, 2009; Hughes et al., 2014; Johnson et al., 2005; Locklear 2010; Marston, 2014). Levine (2013) reported in a survey of teachers who were considering leaving the profession that "salary considerations" were cited as the most important factor in the decision-making process. In an Alliance for Excellent Education Issue Brief (2005), it was further reported, "14.2% of all public school teachers who left the profession in 2004-05 cited salary and benefits as the main reason" (p. 3). Houston (2009) found in his study a number of teachers exiting teaching permanently look for other jobs in fields which pay more; salary appeared to be the major criteria for success. The Buckley et al. (2005) findings also showed the leading cause of teacher attrition was due to "the profession's relatively low wages, especially considering the number of years of higher education the average state-certified teacher has completed" (p. 1109). Studies employing national data sets and state administrative data found teachers are more likely to quit or transfer when they work in districts with lower wages, especially relative to alternative wage opportunities in other professions (Shen et al., 2012; Stinebrickner, 2001, Gritz & Theobald, 1996). Consequently, the comparative attractiveness of jobs in other professions is also a turnover cause.

In assessing the data collected for the study, correlations for the salary factor were significant, ranging from 0.468 to 0.680. The strongest correlation was between the two salary items: salary lower than peers in other professions and salary lower than peers in a nearby school district. For the working conditions factor, the correlations ranged from 0.331 to 0.440, all moderately strong and reasonable considering the items addressed were not as narrow as salary. The contrast result showed salary appeared to be significant with degree, although the amount of difference was only 0.124. In order to clarify the results, a t-test was conducted which grouped

master's and higher together and compared to the bachelor's degree only. The results showed the difference for the salary measure persisted, indicating the degree of education does relate to a teacher's ability to earn a higher salary with a master's degree.

Salary also correlated most strongly to working conditions. The findings from the data revealed there was more acceptance of a lower wage if the working conditions are optimal. Regardless of the research presented in the studies assessed in a review of the literature, the original findings from the data collected in the study illustrated that while salary was certainly significant regarding teacher attrition factors, both administrative support and working conditions ranked higher in importance in teacher attrition.

Relationships. Relationships, or support from colleagues, is valuable when understanding teacher attrition (McClure & Reeves, 2004). As cited in the review of the literature, when teachers have an opportunity to share their views on certain matters and to participate in school decision-making, this acts as an equalizer and contributed to the retention of both new and veteran teachers. The availability of proper resources, guidance, support, and a feeling of comradery were some of the crucial factors were likely to make a public school teacher chose to remain in the profession. Colleagues who are positive tend to offer this type of assistance—along with problem solving approaches and encouragement. Based on this research, it is clear there is a positive relationship between collegiality and teacher retention, especially for newer teachers.

From the original findings in the study, relationships among colleagues (or lack of) was the least strong measure of attrition for teachers. The ANOVA results for the relationship rank revealed there was a significant overall relationship between the salary mean measure and the

working conditions mean measure (p=0.000 and p=0.002, respectively). The contrasts, constructed as before, showed as the rank of relationship with colleagues increased (the more likely to be a factor for attrition), the means for the salary and working conditions measures decreased. The lack of significance for relationship and administrative support indicated how the respondents ranked relationship as an attrition factor had no impact on the agreement or disagreement with statements about relationships or administrative support. Although important, the relationship between collegial relationships and attrition were the least relevant out of the four factors of administrative support, working conditions, salary/benefits, and relationships.

Research Question 3

In examining the data and findings related to Research Question 3, overall demographic factors do not seem to have a major impact on how teacher's rate the importance of the attrition factors as measured through the means of the item summaries, with the possible exception of enrollment.

Discussion

Noted frequently throughout the course of the study, the major purpose of a public school system in any state in the United States is to offer a high-quality education to each and every student, or at least it should be. Yet, the school districts in both Minnesota and the United States as a whole are faced with the challenge of recruiting and retaining quality teachers, and the struggle has been significant. As previously discussed, this is due to a number of factors which include low salaries, lack of administrative support, poor working conditions, and poor relationships with colleagues. Increased teacher turnover is more prominent in high-poverty public schools than in low-poverty schools (Collingridge, 2008; Fitzgerald, 2007; Goodpaster et

al., 2012; Schlechty & Vance, 2015). The conditions found in high-poverty public schools often meant additional job responsibilities, unprofessional duties, unnecessary interruptions, lack of adequate and appropriate resources, lack of proper planning, excessive paperwork, lack of support from colleagues, and strained workplace conditions were present (Hughes et al., 2014). As demonstrated by the National Commission on Teaching and America's Future (2003), the percentage of teacher attrition per year in low-poverty public district schools was 12%, versus 20% in high-poverty schools. This finding was a key issue for public districts in Minnesota, and has become even more prominent since the implementation of the 'No Child Left Behind Act' given the increased focus on testing, the resources devoted to the new policies, and funding for schools based on performance.

For all of these reasons, school districts in Minnesota are face the challenge of recruiting and retaining quality teachers, a major factor in academic success of students. Based on the study by Fitzgerald (2007), it was noted there is increased teacher turnover throughout all of Minnesota's school districts, and over half of all public school teachers in Minnesota left their schools within their first five years of teaching and over 15% of these teachers left the teaching profession permanently after one year of teaching due to professional isolation and stress. This continuous replacement of professionally dissatisfied teachers lowers the educational quality in Minnesota and places the school districts in a costly mode of continual hiring. Such a situation draws school resources away from classrooms and results in poor performance for both teachers and students (Billingsley, 2004).

The study revealed the most important factor in teacher attrition was teachers not feeling supported by administration. Teachers need to feel supported and know what they are doing is

appreciated by administration. Once relationships are established, evaluation can be more meaningful and input can be gathered from staff regarding school issues (curriculum, schedules, class placements, teaching load). This directly relates to job satisfaction. If a teacher feels supported, appreciated, and had a valid voice as a professional in their school environment, they will feel more highly satisfied in their teaching role. The culture of the school is very important in job satisfaction; and administrators influence the culture of a school. As discovered in the findings from the study, working conditions correlated positively with administrative support. If teachers are satisfied with their working conditions and environment, which is closely tied to the presence of administrative support, then students are more apt to be satisfied as well. This serves to enhance student achievement and learning within public schools. There is direct correlation between teachers who felt supported by administration and their level of job satisfaction.

Newer teachers are not being retained in Minnesota to levels needed and the state's Teacher Supply and Demand Report (Minnesota Department of Education, 2013) revealed Minnesota is experiencing critical licensure shortages in the following areas: special education, speech/language, mathematics, science, family and consumer science, and agriculture. This is due to the continuous retirement of qualified teachers in this field, new teachers leaving the profession, and smaller numbers of graduates being trained—particularly in these subjects. Therefore, school districts in Minnesota faced with the problem of filling these positions and schools are continuously at risk for providing students with a poor education.

Retaining Newer Teachers

In Minnesota, similar to the rest of the United States, the increased turnover of teachers is primarily among new teachers who either transfer to other schools, or leave teaching as a profession permanently within their first five years of teaching. In the Minnesota Department of Education Supply and Demand Report (2013), the data showed the state-wide attrition rate in Minnesota for 2011 was around 8%, with 4,224 teachers leaving their positions. The attrition rate for the same year in Southwest Minnesota was 11%. The report indicated 33% of the teachers who were new to the profession in 2006-07 were no longer in the profession in 2011-12. The Minnesota Department of Education Supply and Demand Report (2013) also reported approximately 50% of the teachers who left the profession in Minnesota cited they were seeking better career opportunities with more job satisfaction and higher pay. Elfers et al. (2006) also reported national studies found poor working conditions were also related to issues like "student misbehavior and disinterest, lack of teacher autonomy, unreasonable teaching assignments, lack of professional development opportunities, and inadequate allocation of time all contribute the departure of teachers" (p. 98).

However, the attrition and burnout rate is likely to be reduced if principals and the administrators help to mitigate new teachers' stress through support and recognition. Within a professional school environment, new teachers can be encouraged to stay. Allen and Penuel (2015) asserted the best administrative staff members are those who are warm, open, good listeners, and supportive in multiple ways. New teachers are also encouraged to remain in teaching through public school induction and mentoring programs. Through mentoring, new teachers are more capable of adapting to difficulties as they arise. Often this includes having

positive role models who are concerned about their struggles, which ties directly into the positive response for administrative support. Black (2001) found teachers who were not involved in a mentoring program felt they were left to either sink or swim. She also found an increasing number of school officials support induction and mentoring programs. According to Smith and Ingersoll (2004), studies demonstrated new teacher attrition rates can be cut by close to 50% through a comprehensive induction and mentoring program.

Theoretical Framework

Theoretical theories related to attrition/retention such as the human capital theory, the social learning theory, Maslow's hierarchy of motivations and needs theory, and Herzberg's two factor motivation theory, tie into the findings related to administrative support and working conditions mitigating attrition. Of particular note, out of the four theories, the least revealing was that of the human capital theory, which primarily suggested that individuals always make methodical valuation of costs and benefits in entering and remaining in a profession (Shen et al., 2012). While wealth accumulation may play a role in teacher attrition, it was not found to be highly correlated with teacher attrition in Minnesota.

In evaluating the social learning theory in relationship to the findings learning theory, theorists asserted to clearly understand the decisions of teachers, to either persevere or exit teaching as a profession, it is essential to consider the following: the teacher's personality; initial commitment, educational experiences, professional assimilation into the profession of teaching, environmental influences, and career satisfaction levels (Loeb et al., 2005). Shen (2012) found annual salary for all teachers and salary for senior teachers was positively correlated with teacher retention. Teachers with more experience or more education tend to earn more money, thus

affirming the theory about higher paying teachers would tend to stay in the profession. Although Shen et al. (2012) found a positive association of a teacher's decision to stay in the field, and in the same public school district, with teachers' salary they also found that the teacher's personality, initial commitment, educational experiences, professional assimilation into the profession of teaching, environmental influences, and career satisfaction also played an important role. Based on the results of the study and the tenets of social learning theory, the retention of teachers is related to a teacher's social learning process (Shen et al., 2012).

This study used another theory Maslow's hierarchy of motivations and needs, namely, human beings have a hierarchy of wants or needs. As previously noted, needs are biological and psychological necessities and urge an individual to work toward achieving a certain goal (Marston, 2014). According to Maslow (1943), there are three high-level human needs and four low-level humans. The four low-level needs in Maslow's hierarchy include the need for safety, survival, self-esteem, and belonging. As each one of these four lower needs is met, the motivation to fulfill them decreases. Until these needs are met, an individual will never move past these lower-level needs to higher-level needs. Self-actualization, aesthetic appreciation, and intellectual achievement are the three high-level needs of Maslow's hierarchy (1943).

While some teachers may feel they do not experience a sense of core belonging in their school environments, the majority of teachers feel they have their four lower-level needs met (Herzberg et al., 2011). The higher-level needs operate in such a way as the motivation to fulfill theses needs further increases, rather than declines, as the needs are met (Marston, 2014). Therefore, professionally successful individuals continue to seek wide range to become even more successful. These individuals will continue adding new goals and actively work towards

attaining them; each new success level increases their drive. Teachers in an environment to meet their higher-level needs are more likely to stay in teaching because of motivations which originate more intrinsically, rather than through rewards like monetary compensation, or extrinsic motivators (Herzberg et al., 2011; Marston, 2014). In this manner, teacher attrition does appear to relate to a number of factors motivated by non-monetary values. Nevertheless, this theory does apply more directly to seasoned teachers with master degrees.

The final theory addressed in the study, Herzberg's two factor motivation theory supports some of the findings of the study as well. According to Herzberg et al. (2011), some of the factors causing satisfaction were associated with job content. For example, advancement, responsibility, work, recognition, and achievement were associated with job satisfaction. Alternatively, job dissatisfaction causes were associated with the work environment. Examples consist of relationships with colleagues, work conditions, employee relationships with their employers, salary, technical support from administration, and company policy. The findings by Herzberg et al. (2011) assert employees motivation not necessarily only by extrinsic factors, but rather these factors assist in eliminating dissatisfaction. Herzberg, like Maslow, identified as the greatest motivator the employee's capacity for personal achievement.

The theoretical theories of human capital theory, the social learning theory, and Maslow's hierarchy of motivations and needs theory, and Herzberg's two factor motivation theory tie into the findings of the study in varying ways. While the least substantial was the human capital theory, which suggested that individuals always make methodical valuation of costs and benefits in entering and remaining in a profession, pay as an external factor does play a minor role in teacher attrition. While pay rate is also noted as important in social learning theory, other factors

such as the teacher's personality, initial commitment, educational experiences, professional assimilation into the profession of teaching, environmental influences, and career satisfaction also played an important role in teacher attrition (Shen et al., 2012). Both Maslow's hierarchy of motivations and needs theory and Herzberg's two factor motivation theory also support the idea that teachers who experience having their higher-level needs met are more likely to stay in teaching because of motivations which originate more intrinsically, rather than through rewards like monetary compensation, or extrinsic motivators (Herzberg et al., 2011; Marston, 2014). Herzberg also identified that the greatest motivator is an employee's capacity for personal achievement. These theories fall in line with the findings of the study. Teacher attrition does appear to relate to a number of factors motivated by non-monetary values. Yet, these theories do require looking more deeply into what constitutes having Maslow's lower-level needs met given that teachers who tend to stay in teaching have been teaching for longer periods of time and probably hold master's degrees.

Limitations

There were several limitations to the study. The first was a lower response rate for participants with degrees beyond that of a masters. The second limitation was lack of response for certain items. The third limitation related to the methodology used in the study.

1. The study experienced a lower response rate than expected for teachers holding a degree beyond the level of masters. The potential for the results being tainted are present as other areas of the country may employ more teachers with terminal degrees. Nevertheless, the literature suggested that the majority of teachers hold either a

bachelor's or master's degree, indicating the findings may be a positive representation of overall educational levels for public school teachers.

2. Respondents chose not to complete some items. The items omitted were random so it was difficult to generalize the results given the limited patterns in the data. Nonetheless, this was considered in analyzing the results and it appeared the missing items were not centrally influential to the primary aim of the study.
3. This study used a descriptive quantitative non-experimental approach, conducted through surveys of 15 Southwestern Minnesota school districts, and may not be representative of all school districts in the state of Minnesota. Nevertheless, the results should be transferable to other portions of Minnesota given the large number of districts.

Recommendations for Further Research

Generally, many of the findings in the study are relevant and can significantly impact teacher attrition in both Minnesota and in the United States. Yet, most studies create a number of questions that can be pursued more fully in the future. Below are five recommendations for further research that may provide greater clarity to this issue.

1. A qualitative research study should be conducted with a smaller group of teachers to gain more details related to reasons for leaving the profession. As this was a quantitative study, the depth of information that can come from interviews of teachers, both past and present, could be explored to pursue this topic further. Qualitative analysis including interviews and perhaps even observations could be beneficial in learning more about teacher attritions in Minnesota.

2. A study should be conducted to investigate relationship between administrative support and higher level degree attainment. Although administrative support was related to the degree attained when analyzing the findings for teachers with master's degrees, there were few observations at the higher levels of education. This warrants further research to see if educational level relates to attrition, and if so, how.
3. A study should be conducted to evaluate teacher's perceptions of working conditions in larger school districts. The findings revealed that working conditions are most important to teacher attrition in schools where the enrollment is between 1001 and 1500. When the enrollment number went over 1500, the mean for working conditions went down, indicating that working conditions did not play as significant a role in teacher attrition in larger schools.
4. Further research should be undertaken with teachers who are teaching larger school districts. It should be noted that the mean of administrative support was highest for student enrollment between 1001 and1500, and dropped for the highest enrollment level. The reason for this was not immediately clear and warrants further research. Again, and similar to the above, this warrants further research.
5. A study should be conducted which involves participants who have left the teaching profession. This study only addressed the thoughts and perceptions of teachers still currently working in Minnesota Public School Districts, the findings are not as thorough as they could be if teachers who have left the profession had been part of the study.

Recommendations for Practice

As noted in other areas of the study, in Minnesota, similarly to the rest of the United States, the increased turnover of teachers is primarily among new teachers, who either transfer to other schools, or leave teaching as a profession permanently within their first five years of teaching. However, the attrition may be reduced if some of the following recommendations for practice, leadership, and organizational development are considered.

1. For leadership, principals and administrators can help to mitigate new teachers' stress through increased support and recognition. Since teachers reported that friendly, approachable administrators motivate them to stay in the profession, districts should consider providing professional development for school leaders in the areas of building relationships, active listening, and other interpersonal communication skills.
2. New teachers should be offered increased public school induction and mentoring programs. Through mentoring, new teachers would be better equipped to adapt to difficulties as they arise. Programs with positive role models should be available to aid new teachers. According to Smith and Ingersoll (2004), studies demonstrate that new teacher attrition rates can be cut by close to 50 percent through a comprehensive induction and mentoring program.
3. Programs where new teachers are paired within their first and second years of teaching with a veteran teacher should be created. In one program, the district used a Beginning Teacher Support and Assessment (BTSA) program where new and veteran teachers were paired for two consecutive years (Allen & Penuel, 2015). This program provided early intervention help and support for new teachers and yielded a 98 percent retention

rate. This type of program could be very beneficial in mitigating teacher attrition in Minnesota. Professional Learning Communities are another way for colleagues to build relationships with one another and for teachers to feel supported. McClure and Reeves (2004) shared that teachers who experienced a poor sense of a professional community was one of the main reasons they left teaching. Professional Learning Communities can be promoted on all levels, through numerous avenues, and can provide a venue for teachers to work with curriculum, student data, collaborate on decisions, and implement job-embedded professional development decisions that aid with teacher attrition.

Summary

Based on the findings from the literature review and the original data collected and analyzed in the study, it is clear teacher retention has been, and still is, a major issue in the public school districts. Significant numbers of schools are often faced with the problem of recruiting and retaining quality teachers (Buckley et al., 2005; Halpert, 2011; Hughes et al., 2014; Locklear, 2010; Marston, 2014). Many factors relate to teacher attrition and many overlap. Nevertheless, the findings in the study, through both an analysis of the literature and through the original research, certain clear trends have appeared. This first of these relates to teachers having obtained a masters' degree as their highest degree. Teachers having earned a masters' degree were less likely to leave the profession, and this is related most closely to administrative support. Nevertheless, there were so few observations at the higher levels of education, beyond the attainment of a master's degree, which caution must be taken in making conclusions.

The research further found the factors of administrative support, working conditions, salary/benefits and relationships with colleagues were the primary factors associated with teacher attrition, in order of significance. For administrative support, it was found if the administrative support of teachers was in evidence, teachers were encouraged to continue teaching—thus increasing teacher retention (Schlechty & Vance, 2015). These findings have been corroborated with the original work done in the study, and administrative support has was found to be the single most important factor in retaining teachers in public schools.

In relationship to working conditions, school working conditions also played a significant role in teacher attrition. Based on the findings from Buckley et al. (2005), teachers might willingly work for lower salaries as long as the working conditions are good. Relating to the data and findings of the study conducted, working conditions were more important than salary given working conditions ranked number two in importance for retaining teachers. Working conditions also correlated positively with administrative support. The data revealed working conditions and administrative support play an overlapping role in attrition depending on school enrollment. It appeared working conditions were most important to teacher attrition in schools in which the enrollment is over 1,001 students.

For the salary factor, the findings were also significant, in both the literature and in the study. The strongest correlation was between the two salary items: salary lower than peers in other professions and salary lower than peers in a nearby school district. The results showed the difference for the salary mean measure related to a teacher's ability to earn a higher salary with a master's degree and working conditions. The findings from the data revealed there is more acceptance of a lower wage if the working conditions are optimal. Nevertheless, while salary is

certainly significant regarding teacher attrition factors, both administrative support and working conditions ranked higher in importance in teacher attrition.

In assessing the fourth factor of relationship with colleagues, there is a positive relationship between collegiality and teacher retention, especially for newer teachers. However, from the findings in the study, relationships among teachers (or lack of) were the least strong measure of attrition for teachers. Although important, the relationship between collegial relationships and attrition were the least relevant out of the four factors of administrative support, working conditions, salary/benefits, and relationships with colleagues. Regardless, no one factor or condition operated in isolation and many of the factors discussed related to one another in some manner, although administrative support stood out as most influential. Perhaps what was most significant was the finding that regardless of any external factors, there were some teachers who decide to remain in their present teaching position, citing intrinsic motivators as the main reason.

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Appendices

Appendix A: Initial Invitation to Participate

August 26, 2016

Dear Superintendent:

In an effort to gather teacher perceptions of factors related to attrition, I am requesting the participation of the licensed teaching staff in your district for my doctoral dissertation research at St. Cloud State University. Your district was randomly selected from districts within the SW/WC service cooperative. This quantitative study will examine teachers' perceptions of administrative support, working conditions, relationships with colleagues, and salary. The results of this study will supplement the gap in literature related to teacher attrition in Minnesota. Would your district be willing to serve as participants for this study? The study would ask for participation by the licensed teaching staff in your district.

There are no foreseeable discomforts or risks involved with this study. **Participation is voluntary.** All participants are free to withdraw his/her consent and to discontinue participation in the study at any time. All data provided was kept confidential. No personal information was collected. The time required to complete the online survey is approximately 10 minutes.

If permission is granted, I have enclosed a standard form letter template for your use. It can be copied and pasted onto your district letterhead and returned to me via email. I would appreciate it if the signed forms could be emailed back to me by Friday, September 9, 2016. If interested, your district was provided with an analysis of the results at the conclusion of the study. The online survey was sent out to participants on Monday, October 3, 2016. If there are any questions, concerns, or objections, please call or email Chris at one of the contacts listed below.

Thank you for your time, consideration, and assistance regarding the participation of this study.

Sincerely,

Chris Fenske
Email: cmfenske@stcloudstate.edu
chrisfenske@lakeview2167.com
Cell Phone: (507) 828-6200
Work Phone: (507) 423-5164 ext. 1305

Dr. John Eller
Dissertation Chair
St. Cloud State University
720 Fourth Avenue South
St. Cloud, MN 56301
Email: jfeller@stcloudstate.edu

Appendix B: Survey Instrument

Demographic Information

***1. Do you hold a valid Minnesota teaching license?**

- Yes
- No

***2. What is your gender?**

- Female
- Male

***3. How many total years of teaching experience have you completed?**

- 0-2 years
- 3-5 years
- 6-10 years
- 11-15 years
- 16-20 years
- More than 20 years

4. Number of years taught in current school district

- 0-2 years
- 3-5 years
- 6-10 years
- 11-15 years
- 16-20 years
- More than 20 years

***5. Please indicate how many students are enrolled in your school district?**

- 1 -500
- 501 - 1000
- 1001 & Over

6. What is the highest degree you have attained?

- Bachelors
- Masters
- Specialist or Sixth Year
- Doctorate

Attrition Factors

For each of the following items, rate (on a scale of 1-4) the extent to which you perceive the item would cause you to leave or consider leaving the school or profession in the future.
1 = Strongly Disagree this would cause you to leave or consider leaving the school or profession
2 = Disagree this would cause you to leave or consider leaving the school or profession
3 = Agree this would cause you to leave or consider leaving the school or profession
4 = Strongly Agree this would cause you to leave or consider leaving the school or profession

***7. Attrition Factors**

	Strongly Disagree	Disagree	Agree	Strongly Agree
Lack of support/guidance of building administrator(s)				
Insufficient/Ineffective staff development opportunities				
School facility and/or classroom in disrepair				
Salary lower than peers with a similar degree in another profession				
Major student discipline problems				
Poor/inadequate benefits package				
Lack of mentoring or induction program				
Lack of time for collaboration within grade level or department				
Administrator is intimidating during observations and provides little feedback				
Teachers feel threatened by voicing opinions				
No regular raises or salary advancement				
Not being treated with professionalism/respect by administration				
Administration not involving teachers in decision-making				
Teachers not maintaining meaningful professional relationships with one another				
Teaching load or class size not conducive to teaching and learning				
Salary lower than peers with similar education and experience in a neighboring school district				

Ranked Attrition Factors

Rank (by numbering the following items 1-4) the extent to which each of the factors would be most/least likely to cause you to leave or consider leaving the school or teaching profession:
1 = Least likely to cause you to leave or consider leaving the school or teaching profession
4 = Most likely to cause you to leave or consider leaving the school or teaching profession

***8. Please rank the following;**

Salary (pay, benefits, incentives)

Working Conditions (Class Size, Facilities, Paperwork, Teaching Load)

Relationships with Colleagues (Mentoring, PLC's, Collaborative planning)

Administrative Support

Appendix C: Second Request

October 19, 2016

Dear Participant:

Over the last couple of weeks,many of your teacher colleagues in SW Minnesota responded to a "Factors to Teacher Attrition" survey. Thank you so much for those who have responded thus far, it is appreciated! If you have not responded yet, please know that the survey is open until Friday, October 28. Thank you in advance for helping me out by completing this survey which should only take 5 minutes or less!

Dissertation Topic: Perceived School-Associated Factors Contributing to Teacher Attrition in Southwest Minnesota

https://www.surveymonkey.com/r/TPNS2JL

Sincerely,

Chris Fenske
St. Cloud State Doctoral Candidate
cmfenske@stcloudstate.edu

Appendix D: Final Request

October 26, 2016

Dear Participant,

Over the few weeks, many of your teacher colleagues in SW Minnesota responded to a "Factors to Teacher Attrition" survey. Thank you so much for those who have responded thus far, it is appreciated! If you have not responded yet, please know the survey is open until Friday, October 28, 2016. It would be great if you could help me get to a 55% response rate. Thank you in advance for helping me out by completing this survey which should only take 5 minutes or less!

Dissertation Topic: Perceived School-Associated Factors Contributing to Teacher Attrition in Southwest Minnesota

https://www.surveymonkey.com/r/TPNS2JL

Sincerely,

Chris Fenske
St. Cloud State Doctoral Candidate
cmfenske@stcloudstate.edu

Appendix E: Permission to Participate in Study

District Letterhead

To: Chris Fenske
Email: cmfenske@stcloudstate.edu
chrisfenske@lakeview2167.com

From: (name of school district)

Date:

RE: Agreement to participate in proposed research study

The ***(Your School District)*** has agreed to participate in a study to gather information on teacher perceptions of factors related to attrition. This study will examine teachers' perceptions of administrative support, working conditions, relationships with colleagues, and salary. The results of this study will supplement a gap in literature related to teacher attrition in Minnesota. It is understood all participation is voluntary and individuals can withdraw their participation at any time.

Sincerely,

(Signature)
(Name)
(Title)

Appendix F: Tables

Table 1

Reported Gender

Gender	Frequency	Percent
Female	385	70.3
Male	163	29.7
Total	548	100.0

Table 2

Reported Total Years of Teaching Experience

Years Teaching	Frequency	Percent
0-2 Years	42	7.7
3-5 Years	60	10.9
6-10 Years	90	16.4
11-15 Years	79	14.4
16-20 Years	96	17.5
More than 20 Years	181	33.0
Total	548	100.0

Table 3

Reported Years of Teaching in Current District

Years in Current	Frequency	Percent
0-2 Years	111	20.3
3-5 Years	98	17.9
6-10 Years	93	17.0
11-15 Years	62	11.3
16-20 Years	86	15.7
More than 20 Years	98	17.9
Total	548	100.0

Table 4

Reported School District Enrollment

Enrollment	Frequency	Percent
1-500	143	26.1
501-1000	169	30.8
1001-1500	135	24.6
1501 and over	101	18.4
Total	548	100.0

Table 5

Reported Highest Degree Attained

Highest Degree	Frequency	Percent
Bachelors	247	45.1
Masters	255	46.5
Specialist or Sixth Yr.	43	7.8
Doctorate	3	0.5
Total	548	100.0

Table 6

Cornbach Alpha for Item Reliability

Cronbach's Alpha	N of Items
0.876	16

Table 7

Polychoric Correlations for Likert Items

Item	Salary Lower than Peers in Other Prof.	Inadequate Benefits	No Regular Raises	Salary Lower than Peers in other District
Salary Lower than Peers in Other Prof.	1.000			
Inadequate Benefits	0.526	1.000		
No Regular Raises	0.468	0.517	1.000	
Salary Lower than Peers in other District	0.680	0.528	0.627	1.000
Lack of Support	0.128	0.204	0.347	0.191
Facility in Disrepair	0.293	0.216	0.312	0.252
Major Discipline Problems	0.185	0.249	0.360	0.281
Load or Class Size Not Conducive	0.228	0.320	0.395	0.381
Insufficient Staff Dev.	0.292	0.273	0.231	0.206
Lack of Mentoring	0.318	0.318	0.212	0.257
Lack of Time for Collaboration	0.308	0.243	0.192	0.227
Lack of Relationships Among Teachers	0.170	0.265	0.348	0.271
Administrator is Intimidating	0.110	0.232	0.432	0.263
Teachers Feel Threatened	0.157	0.201	0.426	0.231
Lack of Respect	0.122	0.237	0.516	0.287
Not Involved in Decision Making	0.208	0.146	0.375	0.282

Item	Lack of Support	Facility in Disrepair	Major Discipline Problems	Load or Class Size Not Conducive
Lack of Support	1.000			
Facility in Disrepair	0.331	1.000		
Major Discipline Problems	0.423	0.372	1.000	
Load or Class Size Not Conducive	0.385	0.349	0.440	1.000
Insufficient Staff Dev.	0.443	0.315	0.183	0.249
Lack of Mentoring	0.251	0.299	0.081	0.168
Lack of Time for Collaboration	0.118	0.211	0.019	0.237
Lack of Relationships Among Teachers	0.474	0.253	0.363	0.420
Administrator is Intimidating	0.602	0.351	0.430	0.431
Teachers Feel Threatened	0.589	0.301	0.425	0.404
Lack of Respect	0.742	0.346	0.461	0.456
Not Involved in Decision Making	0.603	0.372	0.431	0.452

Item	Insufficient Staff Dev.	Lack of Mentoring	Lack of Time for Collaboration	Lack of Relationships Among Teachers
Insufficient Staff Dev.	1.000			
Lack of Mentoring	0.494	1.000		
Lack of Time for Collaboration	0.458	0.590	1.000	
Lack of Relationships Among Teachers	0.381	0.337	0.305	1.000
Administrator is Intimidating	0.344	0.334	0.229	0.462
Teachers Feel Threatened	0.268	0.188	0.226	0.452
Lack of Respect	0.316	0.214	0.174	0.570
Not Involved in Decision Making	0.319	0.226	0.309	0.471

Item	Administrator is Intimidating	Teachers Feel Threatened	Lack of Respect	Not Involved in Decision Making
Administrator is Intimidating	1.000			
Teachers Feel Threatened	0.761	1.000		
Lack of Respect	0.768	0.760	1.000	
Not Involved in Decision Making	0.617	0.696	0.750	1.000

Table 8

Chi-Square Test

KMO and Bartlett's Test	
Kaiser-Meyer-Olkin Measure	0.873
Bartlett's Test of Sphericity	
Approx. Chi-Square	4793.548
df	120
Sig.	0.000

Table 9

Communalities

Item	Initial	Extraction
Salary Lower than Peers in Other Prof.	0.581	0.615
Inadequate Benefits	0.433	0.454
No Regular Raises	0.566	0.609
Salary Lower than Peers in other District	0.619	0.752
Lack of Support	0.632	0.589
Facility in Disrepair	0.296	0.315
Major Discipline Problems	0.372	0.540
Load or Class Size Not Conducive	0.393	0.399
Insufficient Staff Dev.	0.434	0.477
Lack of Mentoring	0.504	0.624
Lack of Time for Collaboration	0.488	0.547
Lack of Relationships Among Teachers	0.429	0.412
Administrator is Intimidating	0.710	0.694
Teachers Feel Threatened	0.698	0.724
Lack of Respect	0.821	0.900
Not Involved in Decision Making	0.665	0.629
Extraction Method: Principal Axis Factoring.		

Table 10

Pattern Matrix

Pattern Matrix	Factor			
	1	2	3	4
Salary Lower than Peers in Other Prof.	*-0.199*	*0.751*	*0.165*	
Inadequate Benefits		*0.602*	*0.107*	
No Regular Raises	*0.324*	*0.658*	*-0.125*	
Salary Lower than Peers in other District		*0.894*		
Lack of Support	0.609	-0.135		0.239
Facility in Disrepar			0.160	0.424
Major Discipline Problems	0.133		-0.215	0.685
Load or Class Size Not Conducive	0.211	0.160		0.379
Insufficient Staff Dev.			*0.594*	*0.177*
Lack of Mentoring			*0.792*	
Lack of Time for Collaboration			*0.744*	*-0.186*
Lack of Relationships Among Teachers	*0.390*		*0.217*	*0.172*
Administrator is Intimidating	0.826			
Teachers Feel Threatened	0.927			-0.119
Lack of Respect	0.992			
Not Involved in Decision Making	0.725			

Extraction Method: Principal Axis Factoring.
Rotation Method: Promax with Kaiser Normalization.
Rotation converged in 5 iterations.

Factor Correlation Matrix

Factor	1	2	3	4
Admin	1.000			
Salary	0.379	1.000		
Relationships	0.372	0.405	1.000	
Working	0.662	0.487	0.394	1.000

Table 11

Means and Medians for Summary Measures and Ranks

Descriptive Statistics	N	Minimum	Maximum	Mean	Std. Dev.
Mean of Salary Meas.	548	1	4	2.841	0.639
Mean of Working Meas.	548	1	4	2.808	0.579
Mean of Relationship Meas.	548	1	4	2.329	0.541
Mean of Admin Meas.	548	1	4	2.888	0.794
Salary Rank	533	1	4	2.5	1.137
Working Rank	533	1	4	2.68	1.059
Relationship Rank	533	1	4	2.11	1.09
Admin Rank	533	1	4	2.71	1.085

	Salary Rank	Working Rank	Relationship Rank	Admin Rank
Median	2	3	2	3
Mode	1	3	1	4

Note: Values of 1 and 2 indicate disagreement and 3 and 4 indicate agreement for the summary measures. For the rankings, values of 1 and 2 indicate less likelihood for attrition and 3 and 4 indicate more likelihood for attrition.

Table 12

Mean Measures by Salary Rank

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Mean of Salary Meas.	Between Groups	17.697	3	5.899	15.596	0.000
	Within Groups	200.081	529	0.378		
	Total	217.778	532			
Mean of Working Meas.	Between Groups	4.05	3	1.35	4.123	0.007
	Within Groups	173.211	529	0.327		
	Total	177.261	532			
Mean of Relationship Meas.	Between Groups	0.396	3	0.132	0.449	0.718
	Within Groups	155.59	529	0.294		
	Total	155.986	532			
Mean of Admin Meas.	Between Groups	8.082	3	2.694	4.376	0.005
	Within Groups	325.66	529	0.616		
	Total	333.742	532			

Contrast Coefficients

Contrast	Salary Rank			
	Least Likely	Somewhat Likely	Likely	Most Likely
1	-0.5	-0.5	0.5	0.5
2	-1	0	0	1
3	0	-1	1	0

Contrast Tests

Assume equal variances

	Contrast	Value of Contrast	Std. Error	t	df	Sig. (2-tailed)
Mean of Salary Meas.	1	0.2984	0.053	5.596	529	0.000
	2	0.4952	0.074	6.700	529	0.000
	3	0.1016	0.077	1.321	529	0.187
Mean of Working Meas.	1	-0.0667	0.050	-1.345	529	0.179
	2	-0.0885	0.069	-1.287	529	0.199
	3	-0.0449	0.072	-0.628	529	0.530
Mean of Relationship Meas.	1	-0.0461	0.047	-0.981	529	0.327
	2	-0.0591	0.065	-0.907	529	0.365
	3	-0.0332	0.068	-0.490	529	0.624
Mean of Admin Meas.	1	-0.1683	0.068	-2.474	529	0.014
	2	-0.1295	0.094	-1.373	529	0.170
	3	-0.207	0.098	-2.111	529	0.035

Table 13

Mean Measures by Working Conditions Rank

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Mean of Salary Meas.	Between Groups	0.933	3	0.311	0.759	0.517
	Within Groups	216.845	529	0.41		
	Total	217.778	532			
Mean of Working Meas.	Between Groups	1.681	3	0.56	1.689	0.168
	Within Groups	175.579	529	0.332		
	Total	177.261	532			
Mean of Relationship Meas.	Between Groups	2.436	3	0.812	2.798	0.04
	Within Groups	153.55	529	0.29		
	Total	155.986	532			
Mean of Admin Meas.	Between Groups	1.1	3	0.367	0.583	0.626
	Within Groups	332.642	529	0.629		
	Total	333.742	532			

Contrast Coefficients

Contrast	Working Rank			
	Least Likely	Somewhat Likely	Likely	Most Likely
1	-0.5	-0.5	0.5	0.5
2	-1	0	0	1
3	0	-1	1	0

Contrast Tests

Assume equal variances

	Contrast	Value of Contrast	Std. Error	t	df	Sig. (2-tailed)
Mean of Salary Meas.	1	-0.001	0.057	-0.018	529	0.985
	2	-0.0736	0.085	-0.866	529	0.387
	3	0.0715	0.075	0.953	529	0.341
Mean of Working Meas.	1	0.1137	0.051	2.229	529	0.026
	2	0.1304	0.076	1.705	529	0.089
	3	0.097	0.068	1.437	529	0.151
Mean of Relationship Meas.	1	-0.1307	0.048	-2.740	529	0.006
	2	-0.191	0.072	-2.670	529	0.008
	3	-0.0705	0.063	-1.117	529	0.265
Mean of Admin Meas.	1	-0.0693	0.070	-0.987	529	0.324
	2	-0.0796	0.105	-0.756	529	0.450
	3	-0.0589	0.093	-0.634	529	0.526

Table 14

Mean Measures by Relationships with Colleagues Rank

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Mean of Salary Meas.	Between Groups	11.34	3	3.78	9.686	0.000
	Within Groups	206.438	529	0.39		
	Total	217.778	532			
Mean of Working Meas.	Between Groups	4.736	3	1.579	4.841	0.002
	Within Groups	172.524	529	0.326		
	Total	177.261	532			
Mean of Relationship Meas.	Between Groups	0.857	3	0.286	0.974	0.405
	Within Groups	155.13	529	0.293		
	Total	155.986	532			
Mean of Admin Meas.	Between Groups	2.59	3	0.863	1.379	0.248
	Within Groups	331.153	529	0.626		
	Total	333.742	532			

Contrast Coefficients

Contrast	Relationship Rank			
	Least Likely	Somewhat Likely	Likely	Most Likely
1	-0.5	-0.5	0.5	0.5
2	-1	0	0	1
3	0	-1	1	0

Contrast Tests

Assume equal variances

	Contrast	Value of Contrast	Std. Error	t	df	Sig. (2-tailed)
Mean of Salary Meas.	1	-0.1832	0.058	-3.184	529	0.002
	2	-0.2275	0.082	-2.772	529	0.006
	3	-0.1389	0.081	-1.722	529	0.086
Mean of Working Meas.	1	-0.093	0.053	-1.768	529	0.078
	2	-0.199	0.075	-2.652	529	0.008
	3	0.013	0.074	0.176	529	0.860
Mean of Relationship Meas.	1	0.06	0.050	1.203	529	0.230
	2	0.0024	0.071	0.033	529	0.973
	3	0.1176	0.070	1.682	529	0.093
Mean of Admin Meas.	1	0.0068	0.073	0.094	529	0.925
	2	-0.1275	0.104	-1.227	529	0.220
	3	0.1412	0.102	1.382	529	0.167

Table 15

Mean Measures by Administrative Support

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Mean of Salary Meas.	Between Groups	4.807	3	1.602	3.98	0.008
	Within Groups	212.971	529	0.403		
	Total	217.778	532			
Mean of Working Meas.	Between Groups	3.736	3	1.245	3.796	0.010
	Within Groups	173.525	529	0.328		
	Total	177.261	532			
Mean of Relationship Meas.	Between Groups	3.276	3	1.092	3.783	0.011
	Within Groups	152.71	529	0.289		
	Total	155.986	532			
Mean of Admin Meas.	Between Groups	12.106	3	4.035	6.637	0.000
	Within Groups	321.637	529	0.608		
	Total	333.742	532			

Contrast Coefficients

Contrast	Admin Rank			
	Least Likely	Somewhat Likely	Likely	Most Likely
1	-0.5	-0.5	0.5	0.5
2	-1	0	0	1
3	0	-1	1	0

Contrast Tests

Assume equal variances

	Contrast	Value of Contrast	Std. Error	t	df	Sig. (2-tailed)
Mean of Salary Meas.	1	-0.0916	0.056	-1.628	529	0.104
	2	-0.1033	0.082	-1.254	529	0.210
	3	-0.0799	0.077	-1.042	529	0.298
Mean of Working Meas.	1	0.0736	0.051	1.449	529	0.148
	2	0.233	0.074	3.133	529	0.002
	3	-0.0858	0.069	-1.239	529	0.216
Mean of Relationship Meas.	1	0.1176	0.048	2.468	529	0.014
	2	0.2298	0.070	3.294	529	0.001
	3	0.0054	0.065	0.084	529	0.933
Mean of Admin Meas.	1	0.231	0.069	3.340	529	0.001
	2	0.3378	0.101	3.337	529	0.001
	3	0.1241	0.094	1.317	529	0.188

Table 16

Mean Measures by Reported Gender

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Mean of Salary Meas.	Between Groups	0.049	1	0.049	0.121	0.728
	Within Groups	223.014	546	0.408		
	Total	223.063	547			
Mean of Working Meas.	Between Groups	0.229	1	0.229	0.682	0.409
	Within Groups	183.335	546	0.336		
	Total	183.564	547			
Mean of Relationship Meas.	Between Groups	2.842	1	2.842	9.873	0.002
	Within Groups	157.159	546	0.288		
	Total	160.001	547			
Mean of Admin Meas.	Between Groups	4.733	1	4.733	7.601	0.006
	Within Groups	339.983	546	0.623		
	Total	344.717	547			

Table 17

Mean Measures by Total Years of Teaching Experience

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Mean of Salary Meas.	Between Groups	4.761	5	0.952	2.364	0.039
	Within Groups	218.301	542	0.403		
	Total	223.063	547			
Mean of Working Meas.	Between Groups	0.835	5	0.167	0.495	0.780
	Within Groups	182.729	542	0.337		
	Total	183.564	547			
Mean of Relationship Meas.	Between Groups	0.934	5	0.187	0.637	0.672
	Within Groups	159.066	542	0.293		
	Total	160.001	547			
Mean of Admin Meas.	Between Groups	1.192	5	0.238	0.376	0.865
	Within Groups	343.524	542	0.634		
	Total	344.717	547			

Contrast Coefficients

Contrast	Years Teaching					
	0-2 Years	3-5 Years	6-10 Years	11-15 Years	16-20 Years	More than 20 Years
1	-0.5	-0.5	-0.5	0.5	0.5	0.5

Contrast Tests

Assume equal variances

	Contrast	Value of Contrast	Std. Error	t	df	Sig. (2-tailed)
Mean of Salary Meas.	1	-0.002	0.090	-0.020	542	0.984
Mean of Working Meas.	1	-0.004	0.082	-0.054	542	0.957
Mean of Relationship Meas.	1	-0.083	0.077	-1.085	542	0.278
Mean of Admin Meas.	1	0.126	0.113	1.117	542	0.264

Table 18

T-Test for Total Years of Teaching Experience

	Levene's Test for Equality of Variances		t-test for Equality of Means				
	F	p	t	df	p	Lower	Upper
Mean of Salary Meas.	1.428	0.233	-0.768	546	0.443	-0.156	0.068
Mean of Working Meas.	0.471	0.493	-0.072	546	0.943	-0.106	0.098
Mean of Relationship Meas.	0.001	0.982	-1.231	546	0.219	-0.155	0.035
Mean of Admin Meas.	0.067	0.796	1.104	546	0.270	-0.061	0.218

Table 19

Mean Measures by District Enrollment

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Mean of Salary Meas.	Between Groups	1.42	3	0.473	1.162	0.324
	Within Groups	221.643	544	0.407		
	Total	223.063	547			
Mean of Working Meas.	Between Groups	5.488	3	1.829	5.589	0.001
	Within Groups	178.076	544	0.327		
	Total	183.564	547			
Mean of Relationship Meas.	Between Groups	0.364	3	0.121	0.414	0.743
	Within Groups	159.637	544	0.293		
	Total	160.001	547			
Mean of Admin Meas.	Between Groups	5.147	3	1.716	2.749	0.042
	Within Groups	339.569	544	0.624		
	Total	344.717	547			

Contrast Coefficients

Contrast	Enrollment			
	1-500	501-1000	1001-1500	1501 and over
1	-0.5	-0.5	0.5	0.5

Contrast Tests

Assume equal variances

	Contrast	Value of Contrast	Std. Error	t	df	Sig. (2-tailed)
Mean of Salary Meas.	1	0.093	0.055	1.681	544	0.093
Mean of Working Meas.	1	0.088	0.050	1.768	544	0.078
Mean of Relationship Meas.	1	0.004	0.047	0.094	544	0.925
Mean of Admin Meas.	1	0.020	0.069	0.297	544	0.767

Multiple Comparisons

Bonferroni

Dependent Variable	(I) Enrollment	(J) Enrollment	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Mean of Working Meas.	1-500	501-1000	-0.090	0.065	1.000	-0.262	0.082
		1001-1500	-0.255	0.069	0.001	-0.437	-0.074
		1501 and over	-0.010	0.074	1.000	-0.207	0.187
	501-1000	1-500	0.090	0.065	1.000	-0.082	0.262
		1001-1500	-0.166	0.066	0.075	-0.341	0.009
		1501 and over	0.079	0.072	1.000	-0.111	0.270
	1001-1500	1-500	0.255	0.069	0.001	0.074	0.437
		501-1000	0.166	0.066	0.075	-0.009	0.341
		1501 and over	0.245	0.075	0.007	0.046	0.444
	1501 and over	1-500	0.010	0.074	1.000	-0.187	0.207
		501-1000	-0.079	0.072	1.000	-0.270	0.111
		1001-1500	-0.245	0.075	0.007	-0.444	-0.046
Mean of Admin Meas.	1-500	501-1000	-0.030	0.090	1.000	-0.267	0.208
		1001-1500	-0.180	0.095	0.347	-0.431	0.071
		1501 and over	0.110	0.103	1.000	-0.162	0.382
	501-1000	1-500	0.030	0.090	1.000	-0.208	0.267
		1001-1500	-0.151	0.091	0.596	-0.392	0.091
		1501 and over	0.140	0.099	0.964	-0.124	0.403
	1001-1500	1-500	0.180	0.095	0.347	-0.071	0.431
		501-1000	0.151	0.091	0.596	-0.091	0.392
		1501 and over	0.290	0.104	0.033	0.015	0.565
	1501 and over	1-500	-0.110	0.103	1.000	-0.382	0.162
		501-1000	-0.140	0.099	0.964	-0.403	0.124
		1001-1500	-0.290	0.104	0.033	-0.565	-0.015

* The mean difference is significant at the 0.05 level.

Table 20

Mean Measures by Highest Degree Attained

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Mean of Salary Meas.	Between Groups	2.09	3	0.697	1.715	0.163
	Within Groups	220.973	544	0.406		
	Total	223.063	547			
Mean of Working Meas.	Between Groups	0.526	3	0.175	0.522	0.668
	Within Groups	183.038	544	0.336		
	Total	183.564	547			
Mean of Relationship Meas.	Between Groups	0.692	3	0.231	0.788	0.501
	Within Groups	159.309	544	0.293		
	Total	160.001	547			
Mean of Admin Meas.	Between Groups	5.931	3	1.977	3.175	0.024
	Within Groups	338.785	544	0.623		
	Total	344.717	547			

Contrast Coefficients

Contrast	Highest Degree			
	Bachelors	Masters	Specialist or Sixth Year	Doctorate
1	-1	1	0	0

Contrast Tests

Assume equal variances

	Contrast	Value of Contrast	Std. Error	t	df	Sig. (2-tailed)
Mean of Salary Meas.	1	0.124	0.057	2.175	544	0.030
Mean of Working Meas.	1	0.029	0.052	0.556	544	0.578
Mean of Relationship Meas.	1	-0.001	0.048	-0.025	544	0.980
Mean of Admin Meas.	1	0.087	0.070	1.240	544	0.216

Table 21

T-test for Highest Degree Attained

	Highest Degree	N	Mean	Std. Deviation	Std. Error Mean
Mean of Salary Meas.	>= 2	301	2.897	0.639	0.037
	< 2	247	2.773	0.633	0.040
Mean of Working Meas.	>= 2	301	2.813	0.544	0.031
	< 2	247	2.801	0.621	0.039
Mean of Relationship Meas.	>= 2	301	2.336	0.536	0.031
	< 2	247	2.320	0.548	0.035
Mean of Admin Meas.	>= 2	301	2.901	0.776	0.045
	< 2	247	2.873	0.817	0.052

Independent Samples Test

Equal variances assumed

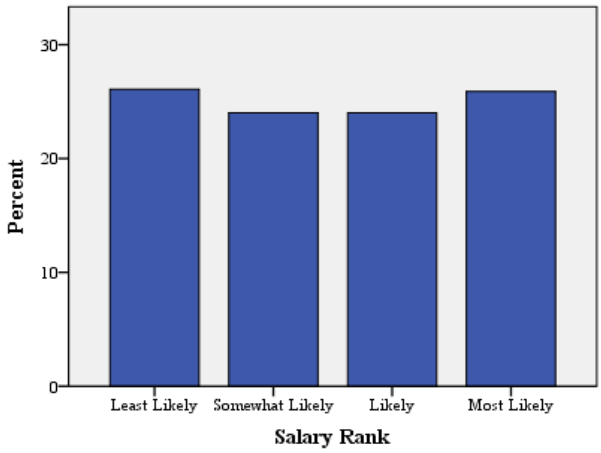
	Levene's Test for Equality of		t-test for Equality of Means						
								Lower	Upper
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the	
Mean of Salary Meas.	0.035	0.851	2.265	546	0.024	0.124	0.055	0.016	0.231
Mean of Working Meas.	5.284	0.022	0.251	546	0.802	0.013	0.050	-0.085	0.110
Mean of Relationship Meas.	0.456	0.500	0.338	546	0.735	0.016	0.046	-0.076	0.107
Mean of Admin Meas.	1.231	0.268	0.421	546	0.674	0.029	0.068	-0.105	0.163

Table 22

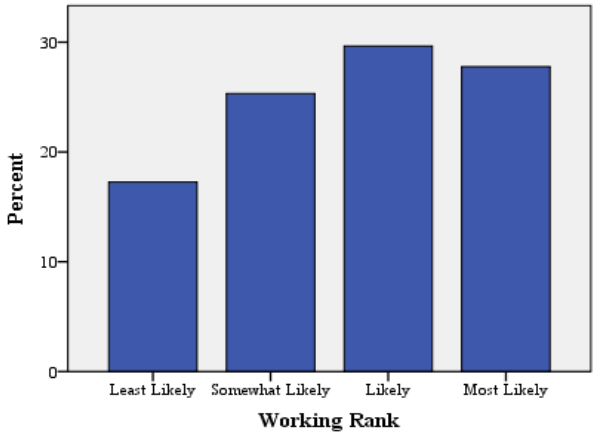
Means by Degree

Highest Degree		Mean of Salary Meas.	Mean of Working Meas.	Mean of Relationship Meas.	Mean of Admin Meas.
Bachelors	Mean	2.773	2.801	2.320	2.873
	N	247	247	247	247
	Std. Deviation	0.633	0.621	0.548	0.817
Masters	Mean	2.897	2.829	2.319	2.960
	N	255	255	255	255
	Std. Deviation	0.651	0.546	0.536	0.766
Specialist or Sixth Year	Mean	2.901	2.733	2.413	2.587
	N	43	43	43	43
	Std. Deviation	0.585	0.541	0.503	0.767
Doctorate	Mean	2.833	2.583	2.667	2.417
	N	3	3	3	3
	Std. Deviation	0.382	0.289	0.946	0.629
Total	Mean	2.841	2.808	2.329	2.888
	N	548	548	548	548
	Std. Deviation	0.639	0.579	0.541	0.794

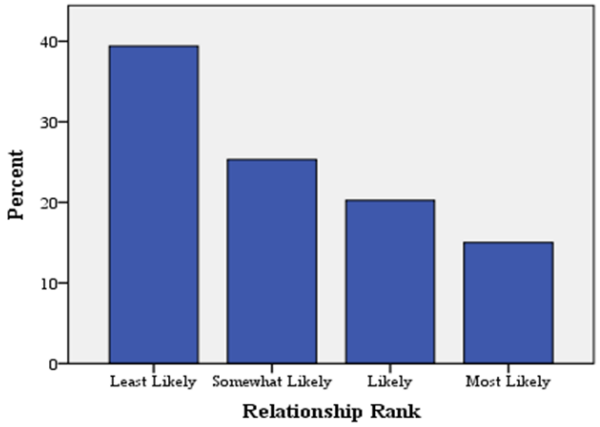
Appendix G: Graphs



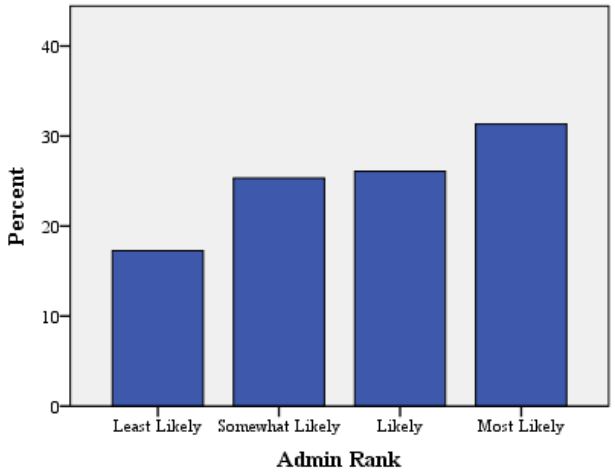
Graph 1. Respondent Ranking of Salary as an Attrition Factor



Graph 2. Respondent Ranking of Working Conditions as an Attrition Factor



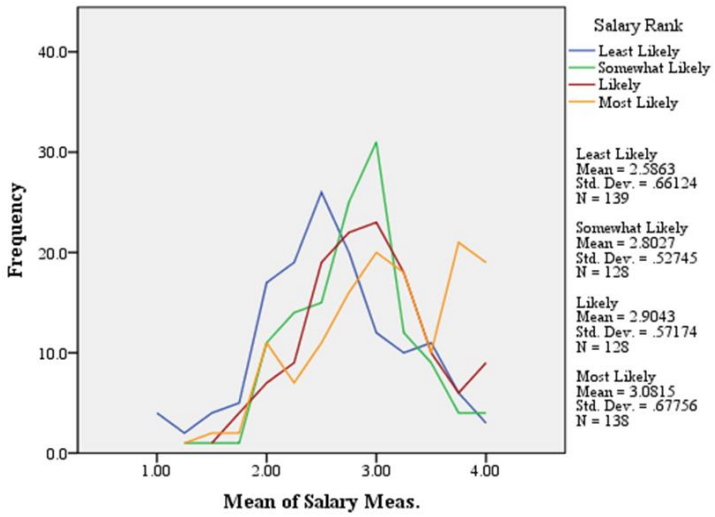
Graph 3. Respondent Ranking of Relationships as an Attrition Factor



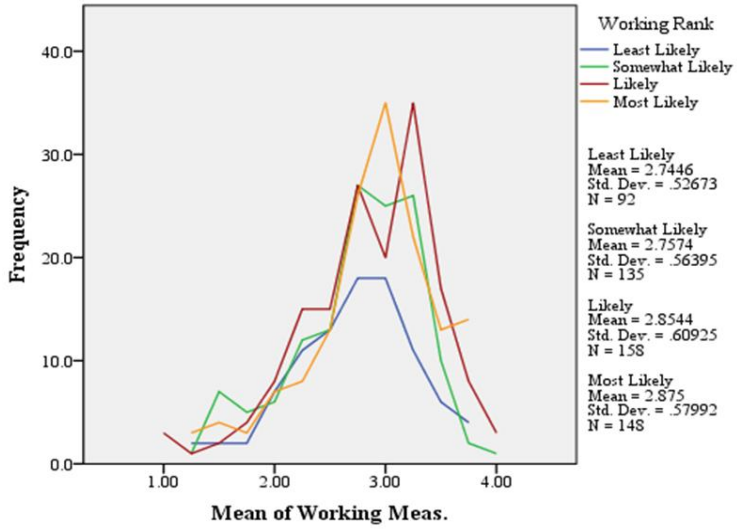
Graph 4. Respondent Ranking of Administrative Support as an Attrition Factor

Graph 5.

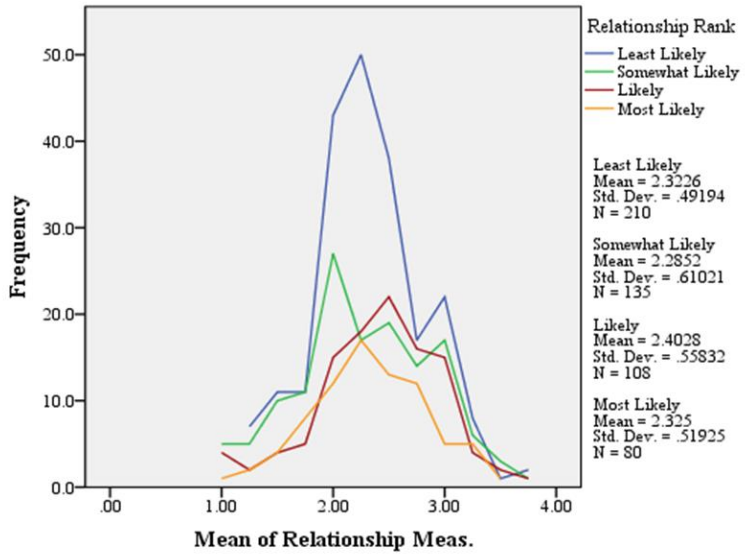
Relationship between ranking and summary of measures for salary as an attrition cause



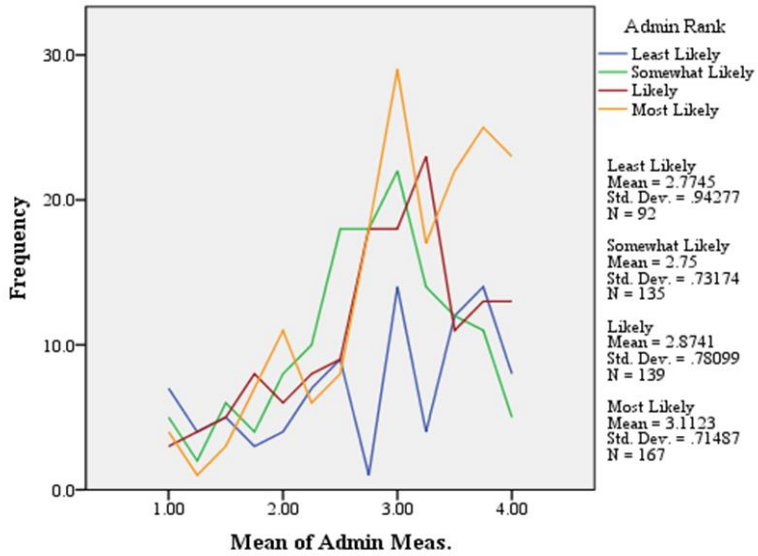
Graph 5. Relationship Between Ranking and Summary of Measures for Salary as an Attrition Cause



Graph 6. Relationship Between Ranking and Summary of Measures for Working Conditions as an Attrition Cause



Graph 7. Relationship Between Ranking and Summary of Measures for Relationships as an Attrition Cause



Graph 8. Relationship Between Ranking and Summary of Measures for Administrative Support as an Attrition Factor