TEACHER SUPPORT SYSTEMS IN RURAL NEBRASKA SCHOOLS:

COMPONENTS THAT IMPACT TEACHER RETENTION

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TEACHER SUPPORT SYSTEMS IN RURAL NEBRASKA SCHOOLS: COMPONENTS THAT IMPACT TEACHER RETENTION

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The classroom teacher has been found to have the greatest impact on student learning and student achievement. Many school districts utilize one or more professional development models to support teacher capacity and growth. The importance of the classroom teacher cannot be understated. Yet, teacher retention and attrition has reached concerning levels across the nation. Teachers leave the educational profession for a variety of reasons. Much research has been conducted on teacher characteristics and school organizational factors that impact teacher retention. However, studies are void of research of the relationship of teacher support systems and teacher retention.

The purpose of this quantitative study was to examine the relationship between teacher support systems and teacher retention in rural Nebraska schools. Nebraska rural schools often have a difficult time recruiting and retaining qualified teachers. Most Nebraska rural schools have one or more teacher support systems in place to help develop teachers. Due to resources and location those teacher support systems may be less developed and formalized. Teacher support systems for this study were categorized into four composite variables: induction programs, mentoring, peer coaching, and professional learning communities. A quantitative questionnaire was developed by the researcher for the purpose of this study. The questionnaire was sent out to 151 Nebraska superintendents whose school district had a Nebraska Schools Activities Association

(NSAA) 3-grade enrollment of 110 students or less. Of the 151 emails that were sent, 83 surveys returned were considered complete. The resulting response rate was 54.9%.

Multiple regression procedures were computed to predict teacher retention. Findings of this study indicated that the selected teacher support systems were not statistically significant in predicting teacher retention. However, one component variable, instructional strategies, was found to have a significant impact on teacher retention.

Based on the findings, recommendations for future research were included. While there was an abundance of individual research on teacher support systems and teacher retention there are opportunities for research around the possible relationship that exist between the two. There are undoubtedly more variables impacting teacher support systems and teacher retention. Future research may include studies collecting quantitative and qualitative data on the aforementioned variables through a mixed method approach.

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CHAPTER 1: INTRODUCTION

In April, May, and June, Boards of Education, school superintendents and building principals anxiously await applications for teacher vacancies. The spring season for many school districts is an anxious time as the hiring season unfolds. A common worry for school officials is attracting qualified applicants. For many school districts teacher recruitment is the first step in building a quality instructional staff. The second step, in creating a quality staff, is retaining those teachers employed in the school district.

Recruiting qualified teachers to rural settings has its' own set of issues. For example, due to the nature of a rural school's size and enrollment a high school math teacher may teach all levels of math from 7th grade pre-algebra to an upper-level calculus class. While the numbers of students in each class may not be all that different from an urban teacher the planning and preparation time is substantial as most larger school teachers have one or two content areas for which to prepare for. At the elementary level most rural schools have one or two teachers per grade. This isolates the elementary teacher and places them on an island. In a large school setting same grade elementary teachers can meet to plan lessons, work on assessments, and problem solve student issues.

The Classroom Teacher

Recruiting and retaining quality teachers is important because student achievement suffers when quality teachers leave the classroom. The classroom teacher has the greatest impact on student achievement (Darling-Hammond, 2000). Researchers suggest that teachers only become effective in the classroom after 5-8 years of teaching (Newton, 2017). Another study notes that it may take slightly less time, three to seven

years, for a novice teacher to become a highly-qualified teacher (Catrett et al. 2008). Out of all the factors associated with student achievement the role of the teacher is tantamount to the improvement of student learning (Hofman & Tesfaw, 2004). The impact that the classroom teacher has on student achievement cannot be overvalued; it is the greatest factor influencing a student's level of achievement.

Teacher Retention

Teacher turnover and strategies to keep teachers in the classroom has been a growing topic of conversation. Annually, teachers leave the profession by the tens of thousands (Boyd, Grossman, Ing, Lankford, Loeb, & Wyckoff, 2011). Many teachers that leave teaching are new or inexperienced. The first five years of teaching are critical to developing confidence and efficacy. It is estimated that annually 20% to 50% of inexperienced teachers left the teaching profession within the first five years (Catrett et al., 2008; Ingersoll & Strong, 2003). The teacher shortage is certainly not relegated to inexperienced teachers. Due to retirement and other factors experienced teachers makeup a portion of teachers leaving the profession. It is estimated that 10% to 15% of teachers leave teaching and that includes inexperienced and experienced teachers (Ingersoll, 2001). The shortage of teachers is an ongoing problem in American schools.

Teacher Support Systems

There are a variety of teacher support systems across the nation. Teacher support systems help build teacher competencies. Both inexperienced and experienced teachers need assistance with designing lessons, implementing instructional strategies, building classroom assessments, classroom management, etc. Teacher support systems are constructed to provide the needed assistance and support of the teacher. As a teacher's

level of competency grows so to does their teacher efficacy and teacher satisfaction. A high level of teacher efficacy and teacher satisfaction has been associated with higher levels of teacher retention (Betoret, 2006; Klassen et al., 2009).

Teacher Shortage in Nebraska

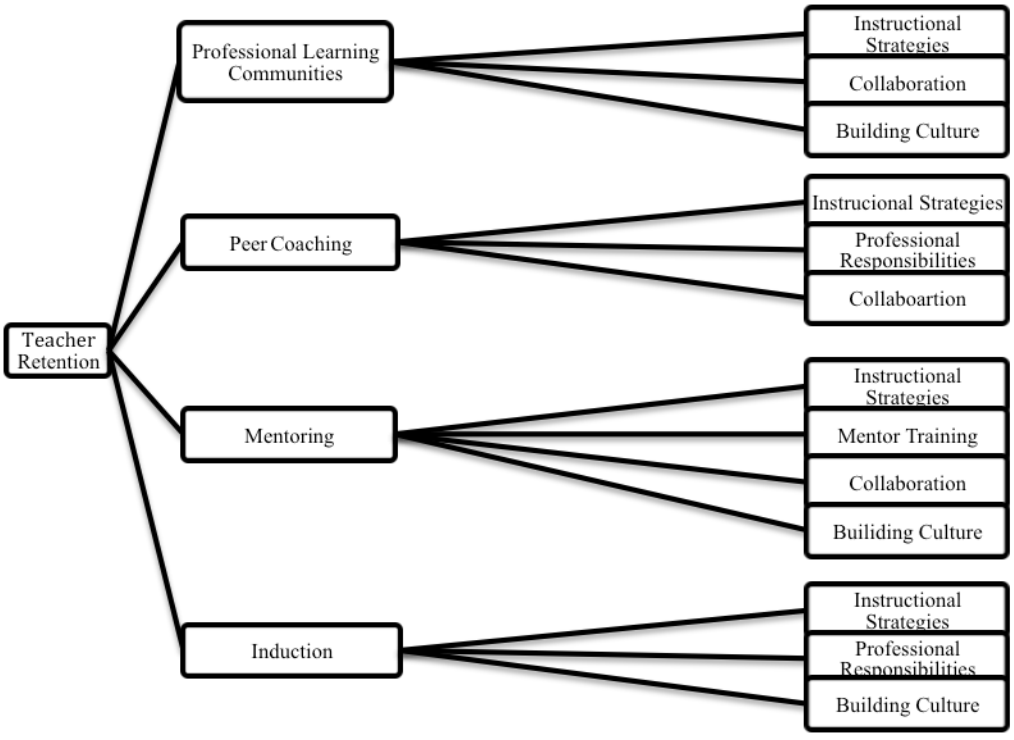
The Nebraska Department of Education has collected data on Nebraska teacher vacancies beginning with the 2000-2001 school year. Archived results indicate that the number of unfilled teacher positions in Nebraska school districts averaged 49 during the school years 2000-2001 to 2013-2014 (Nebraska Department of Education, 2015). Current data from the 2014-2015 school year to the 2017-2018 school year resulted in an average of nearly 79 unfilled teaching positions (Nebraska Department of Education, 2018).

Purpose of Study

The purpose of this quantitative study was to examine the relationship between teacher support systems and teacher retention in rural Nebraska schools. Nebraska rural schools often have a difficult time recruiting and retaining qualified teachers (Nebraska Department of Education, 2018). Most Nebraska rural schools have one or more teacher support systems in place to help develop teachers. Due to resources and location those teacher support systems may be less developed and formalized. For this study the dependent (criterion) variable was teacher retention. There were four independent (predictor) variables for this study. The predictor variables were teacher support systems and are categorized as the four variables: induction programs, mentoring, peer coaching, and learning communities. Components of each predictor variable were analyzed as well. The component variables for induction were instructional strategies, professional

responsibilities, and building culture. Components within the mentoring variable were instructional strategies, mentor training, collaboration, and building culture. The third variable, peer coaching, included instructional strategies, professional responsibilities, and collaboration. The last variable, professional learning community was made up of the component variables: instructional strategies, collaboration and building culture (Figure 1). Each component variable within four composite variables were derived from the evidence in the literature.

Figure 1
Teacher Retention Conceptual Model



Definition of Terms

In order to provide understanding and meaning in this study, the following definitions of terms are provided. Definitions without references were developed by the author.

Induction is a teacher support system provided for first year teachers. Generally, induction programs provide support, guidance, and orientation for beginning teachers during the transition into their first teaching job (Ingersoll & Strong, 2004).

Professional Learning Communities are a group of educators that meet regularly to collaborate on instructional strategies, student work and curriculum. Learning communities share values and beliefs about the system they teach in and teaching in general (DuFour and Eaker, 1998).

Mentoring consists of structured guidance and regular and ongoing support for teachers, especially beginning teachers, that are designed to help the teachers continue to improve their practice of teaching and to develop their instructional skills.

Novice teacher is associated with a teacher that is inexperienced or new to the field. Research describes a novice teacher as one with less than 3 years of teaching experience and one whose teaching tends to focus on "survival" (Huberman, 1993) and establishing basic classroom routines (Sherin & Drake, 2000).

Peer coaching is a confidential process through which two or more professional colleagues work together to reflect on current practices; expand, refine, and build new skills; share ideas; teach one another; conduct classroom research; or solve problems in the workplace. Although peer coaching seems to be the most prominent label for this type of activity, a variety of other names are used in schools: peer support, consulting colleagues, peer sharing, and caring (Robbins, 1991).

Teacher support system describes the various models of support to assist teachers in building teacher competencies. Teacher competencies include: knowledge of student learning, knowledge of subject matter, creating an effective classroom environment,

effective lesson planning, and knowledge of design and effective assessment practices. For the purpose of this study teacher support systems are categorized into four areas: induction programs, mentoring, peer coaching, and learning communities.

Teacher attrition is a descriptor of teachers leaving their present teaching assignment. Teacher attrition may occur for a variety of reasons (i.e. leaving the profession, changing teaching areas, changing schools, and retirement).

Teacher efficacy is an intrinsic belief in a teacher's capabilities to bring about the necessary outcomes of student engagement and learning, even among the most hard to reach student (Hoy, Hoy, & Tschannen-Moran, 1998).

Teacher retention is a teacher staying in a district from one year to the next. Teacher retention is a field of study focusing on how factors such as school characteristics and teacher demographics affect whether teachers stay in their schools, move to different schools, or leave the profession before retirement.

Summary

The teacher shortage is a growing concern in schools in Nebraska (Nebraska Department of Education, 2015 and Nebraska Department of Education, 2018). Both inexperienced and experienced teachers leave the teaching profession annually with high frequency (Fitzpatrick & Levenheim, 2014 and Harper, Ratliff, Singleton, & Watson, 2010). The more effective and satisfied a teacher feels the more inclined they are to stay in the educational field. Research supports that teacher support systems have a positive impact on teacher confidence, building teacher efficacy and teacher satisfaction. Therefore, the lack of available research about the influence teacher support systems have on teacher retention emphasizes the need for such information to be researched. The

research was sought to determine if a relationship between teacher retention and teacher support systems exists.

Research Questions:

1. Is there a variable within each composite variable that is statistically significant in predicting a school's teacher support models' quality?
2. Which teacher support system is the best predictor of teacher retention in rural Nebraska schools?
3. What variables within the complete conceptual model are statistically significant in predicting teacher retention?

CHAPTER 2: REVIEW OF RELATED LITERATURE AND RESEARCH

Chapter 2 provides a review of literature and research related to the topics of teacher retention and teacher support systems. The review consists of sections, which are related to the rationale for studying the relationship between teacher retention and the impact of teacher support systems. The chapter is divided into sections that include (a) a definition of teacher retention, current teacher retention statistics and characteristics, (b) the factors influencing teacher retention, (c) teacher efficacy and teacher satisfaction, and (d) the role of teacher support systems. For the purpose of this study teacher support systems were categorized into four areas: induction programs, mentoring, peer coaching, and learning communities. The chapter ends with a summary and the research questions.

Teacher Retention

Retention of public school teachers is a topic that has been studied for many years. For the purpose of this study, teacher retention is defined as teachers staying in a school district from one year to the next. There are a variety of reasons that teachers enter the profession. Benefits, such as vacation time, working conditions, salary, and the intrinsic value of helping others, are greater than other professions (Hughes, 2012). Teachers leave school districts for a variety of reasons as well. Teachers make career and professional decisions as they assess the benefits of remaining in the education profession. Teacher retention in hard-to-staff schools primarily correctional, residential, Title I, and rural schools is an on-going problem (Allen & Malloy, 2007; Feng & Sass, 2015; Hughes, Matt, & O'Reilly, 2014; Knauer, 2014). In recent years teacher attrition, voluntarily leaving the classroom, has become a significant challenge.

Current teacher retention statistics. It has become more and more difficult to retain qualified teachers in the past century (Imig, Ndoye, & Parker, 2009). A projection in 1994 suggested that public schools in the United States needed to hire 2 million teachers in the upcoming decade to replace a large contingent of retiring baby boomers (Newton & Shaw, 2014). In 2004, that goal was achieved as approximately 2.25 million teachers were hired. However, during that same 10-year time span 2.7 million teachers either retired or left the profession (Newton & Shaw, 2014). The study by Newton and Shaw (2014) further reveals that of teachers who began teaching in public schools in 2007, 10% were not teaching by the 2008-2009 school year, and 12% were not teaching during the 2009-2010 school year. Annually, approximately 500,000 teachers leave their school district (Boyd, Grossman, Ing, Lankford, Loeb, & Wyckoff, 2011). Novice teachers seem to make up a large percentage of teachers not returning. Estimates of teachers leaving within the first five years of teaching range from 20% to 50% (Catrett, Houchins, & O'Rourke, 2008; Ingersoll & Smith, 2003). However, seasoned teachers leave the field of teaching as well. Accordingly, the loss of both inexperienced and experienced educators results in an annual turnover rate of roughly 13% to 15% (Ingersoll, 2001). Teacher retention continues to present challenges for many school districts across the nation. Both novice and experienced teachers are leaving the teaching profession.

Teacher characteristics influencing teacher retention. Several factors can influence a teacher's decision to leave the profession. Factors such as: age, gender, ethnicity, content and grade level assignment and a teacher's level of academic achievement impact an individual's desire to stay in the profession of teaching.

Age is one characteristic that influences teachers leaving the profession (Hanushek, Kain, & Rivkin, 2004). Younger teachers often leave the profession for family reasons. Family reasons can include starting a family and the need for childcare (Hughes, 2012). Younger teachers are also prone to becoming dissatisfied with the teaching profession. A study by Grissmer and Kirby (1997) noted that younger teachers had not acquired the necessary capital in relation to the theory of human capital and thus had a higher attrition rate than older teachers. Attrition is also higher in younger teachers versus older teachers due to stress (Harper, Ratliff, Singleton, & Watson, 2010). Retirement is the main reason older teachers leave the profession. In 2010, more than one-third of teachers in the United States were over 50 (Fitzpatrick & Levenheim, 2014). According to data on retirement from National Center for Education Statistics' Schools and Staffing Survey (SASS) an estimated 269,800 teachers left the classroom in the 2008-2009 school year and 27.8 percent of them retired.

Teacher gender and ethnicity are also related to retention. Female teachers are more likely to leave the profession than are their male counterparts, even though women compose the majority of the teacher workforce (Borman & Dowling, 2006). Teacher ethnicity influences retention rates as well. White teachers are 1.36 times more likely to leave the educational field than non-white teachers (Hughes, 2012). Teachers tend to migrate toward schools that match their ethnicity. Teachers feel more comfortable and more effective teaching students of the same ethnicity. Teaching becomes more difficult if the teacher and the student do not share social expectations, race, ethnicity and language (Birkeland & Johnson, 2003).

Content area and grade level assignments also influence teacher retention. Secondary teachers leave teaching at a higher rate than elementary teachers (Hughes, 2012). This is also true at the middle school and junior high level. Middle school teachers tend to leave the teaching profession due to the level of maturity of the students (Brill & McCartney, 2008). One of the most important findings associated with teacher retention relates to the content area being taught. The subject areas of mathematics and science have some of the highest percentages of teachers leaving (Ingersoll, 2001). Mathematics and science teachers often leave education due to the availability of multiple career opportunities that require a degree in the areas of mathematics and science (Borman & Dowling, 2006).

Lastly, the academic ability of a teacher impacts teacher retention. Teachers who have higher measured academic abilities leave the field of teaching at a higher rate than those teachers that have lower measured academic abilities. A study of teachers and ACT scores suggested that teachers who scored high on the ACT were more likely to leave teaching (Monroe, Podgursky, & Watson, 2004). A study indicated that college graduates with high measured ability tend to not enter into the profession of education (Daley, Guarino, & Santibanez, 2006). Another example of ability on teacher retention is scores on the National Teacher Examination. Teachers with several years of teaching experience who scored well on the National Teacher Examination were more likely to leave teaching as compared to those who scored lower (Murnane, Singer, & Willett, 1989).

Research has identified teacher characteristics that relate to teacher retention. The body of research suggests that age, gender, ethnicity, content and grade level assignment, and an individual's level of academic achievement influence a teacher's propensity to

stay in the teaching profession. As important as it is to identify teacher characteristics that impact teacher retention, research also has identified many organizational factors that influence teacher retention.

School and organizational factors influencing teacher retention. As the teacher shortage continues to be a concern, research has been conducted to identify why teachers stay in the teaching profession in relation to school and organizational characteristics. School and organizational characteristics create the climate and working conditions for each school. School and organizational working conditions impact teacher retention in a number of ways. Perhaps the strongest contributor on teacher retention is school climate (Ingersoll & Smith, 2003). This section reviews the research associated with the identified system factors that affect teacher retention. Salary/compensation, student discipline problems and achievement, leadership/administration support, and school facilities/resources all have an effect on teacher retention.

Compensation and associated benefits such as; loan forgiveness and teacher scholarships have been found to have a correlation with teacher job satisfaction. A study by Prygocki (2004) found that Catholic schools had more issues with teacher retention than their public school counterparts. The study found that the disparity between parochial and public school teacher retention was primarily due to salary. Parochial school teachers, historically, have been paid much less than public school teachers. Teacher turnover has been found to be high due to a lack of support financially (Perrachione, Petersen, & Rosser, 2008). In recent years school districts have attempted to be creative by providing stipends and college loan forgiveness programs to supplement financial compensation for teachers (Feng & Sass, 2015). Statistics from 2009 indicated

that, at least 40 states offered some form of scholarships for teachers or loan forgiveness. However, one study of recruiting bonuses showed there was limited evidence that teacher stipends and bonuses impacted teacher retention (Fowler, 2003).

Student behavior and discipline is the second most cited reason for teacher attrition (Brill & McCartney, 2008). Helping students is a major motivator in choosing to be a teacher. However, once in the field, student discipline problems coupled with students' lack of motivation may lead teachers to doubt their ability to impact student learning. Accordingly, schools that highlight student success and explicitly encourage and motivate positive student behavior are more likely to have greater teacher retention (Swars, Meyers, Mays, & Lack, 2009). Student achievement also impacts teacher retention. School districts that have high-standardized achievement scores retain more teachers (Borman & Dowling, 2006). Thus a teacher's decision to stay or leave the profession may be impacted by the school climate that is shaped by student behavior, motivation and achievement.

Studies show that strong administrative support directly influences teacher retention in a positive manner (Baker, 2007; Arnold & Otto, 2005). Teachers who feel supported by their direct supervisor are more likely to be satisfied with the district in which they teach. A study found that 14% of the teachers surveyed were leaving the profession because they were dissatisfied with teaching. Furthermore, of those 14% surveyed the reason they gave for their dissatisfaction was lack of support from school leaders and job-related stressors (Baker, 2007). Teacher job satisfaction is affected by leadership, which has an impact on teacher retention (Imig, Ndoye, & Parker, 2009). Young teachers, those in the first three years of teaching, need a strong leader. Teachers

who have strong administrative support have a higher level of job satisfaction than those who do not. Consequently, schools where servant leadership is practiced have higher levels of teacher retention due to teachers being more satisfied. Serving the employee, in this case, the teacher is the top priority of the school leader (Imig, Ndoye, & Parker, 2019; Newton & Shaw, 2014). Specific content areas can be more prone to leaving their position due to leadership than others. For instance, special education teachers are more likely to leave teaching when there is a noticed lack of support from administration (Hughes, Matt, & O'Reilly, 2015). Administrative support has an impact on teacher retention. Teachers' job satisfaction and teacher retention has been directly associated with strong administrative support (Billingsley & Cross, 1991).

The contribution of facility and resources on school climate is another factor in teacher retention. Lack of resources and inadequate facilities have lead to teacher turnover (Hughes, 2012). Good teachers are less likely to work in schools with poor heating and cooling systems. Experienced teachers feel less effective teaching poorly maintained classrooms (Borman & Dowling, 2006; Brill & McCartney, 2008). "The tendency for good teachers to avoid poor schools, and for experienced teacher to leave them, has been amply documented" (Rivkin et al., 2005, p. 541). Inadequate facilities and lack of funding are attributes of schools located in inner cities and schools that have high levels of poverty. While the literature is unclear on the impact that poverty has on teacher retention it cannot be overlooked. Teacher retention may be influenced by high rates of student poverty. However, below-average facilities and lack of resources are present as well (Lankford, Loeb, & Wyckoff, 2002). Environment deficiencies and inadequate resources have a negative impact on teacher retention.

Job satisfaction and teacher retention. Job satisfaction amongst teachers can be defined in several different ways (Weiqi, 2007). There are several underlying factors of job satisfaction. Teacher characteristics relate to teacher retention. Characteristics such as: age, gender and ethnicity, content area and grade level teaching assignment, and the academic achievement level of the teacher have been identified as having an impact on teacher retention. Teacher retention is also influenced by a school's climate. School climate is shaped by the several organizational factors. Research has identified teacher salary/compensation, student behavior and discipline, administrative support/leadership and facility and resources as factors that shape school climate and impact teacher retention. Both teacher characteristics and organizational factors are extrinsic components that affect teacher satisfaction. Teacher efficacy is also an intrinsic motivator influencing teacher satisfaction.

Teacher satisfaction and teacher efficacy. Both teacher characteristics and organizational factors are extrinsic components that affect teacher satisfaction. Teacher efficacy is also an intrinsic motivator influencing teacher satisfaction. Teacher efficacy is defined as an intrinsic belief in a teacher's capabilities to bring about the necessary outcomes of student engagement and learning, even among the most hard to reach student (Hoy, Hoy, & Tschannen-Moran, 1998). Efficacious teachers are more resilient and feel a sense of satisfaction in a job well done. Resilient teachers see the most difficult tasks as challenges. Teacher efficacy is shaped by certain beliefs. "Efficacy beliefs influence teachers' levels of effort, goal setting, persistence, resilience, willingness to try new ideas and strategies, enthusiasm, organization, planning, fairness, and commitment to teaching" (Tait, 2008, p. 59).

Teacher efficacy has an impact on teacher satisfaction. A teacher's efficacy is developed in the early years of teaching. As teacher efficacy is shaped, professional identity is developed and becomes resistant to change (Tait, 2008). It is paramount that young teachers develop their professional identity as it leads to greater levels of satisfaction. Teachers exhibiting a sense of efficacy experience less job-related stress. Teachers with low efficacy experience greater difficulties in teaching, higher levels of job-related stress and lower levels of job satisfaction (Betoret, 2006; Klassen et al., 2009). Overall several domains of self-efficacy shape teacher efficacy. The domains of lesson planning, instructional strategies, classroom management and student engagement have been found to be key in teacher efficacy (Bandura, 1997; Klassen & Chui, 2010).

Teacher satisfaction leads to greater teacher retention (Hughes, Matt, & O'Reilly, 2015). Teachers experiencing high levels of efficacy experience greater job satisfaction. Developing efficacy in teachers is necessary in addressing teacher retention. Teachers who expand and grow become more confident and competent. Teachers feel a higher level of efficacy and are more confident when receiving feedback, encouragement and guidance from other teachers and administrators (Tait, 2008). Teacher support systems provide a network for teachers to grow and expand the domains associated with teacher efficacy.

Teacher Support Systems

Teacher support systems have seen increased recognition during the past two decades. In most cases, teacher support systems have evolved from the concept of adult learning for educators. The process of adult learning and the transferring of learning are at the heart of developing teacher competency (Cocking, Bransford, & Brown, 2000). A

key component of teacher support systems are the establishment of culture that aids in teacher satisfaction. School leaders work to develop a culture of collaboration, innovation, and inquiry while promoting learning for all (Erickson, 2010).

Positive work experiences for teachers have been a primary influence on teacher job satisfaction. Teachers who have an opportunity to collaborate with colleagues, serve in leadership roles, and improve their skills and abilities as professionals, were much more satisfied with their role as a teacher as compared to those who did not have those experiences (Perrachione, Petersen & Rosser, 2008). Staff relations data collected from first year teachers further supports the benefits of a teacher support as professional development on building teacher job satisfaction (Boyd, et al., 2011). The results indicated that cooperative effort among teachers, shared beliefs and values of teachers, coordination and collaboration of like teachers, gaining good advice from fellow teachers, and school leaders encouraging experimentation in the classroom strongly influenced new teachers desire to stay in their present school (Boyd et al., 2011). The importance of teacher support systems cannot be overemphasized as they relate to teacher job satisfaction. Induction programs, mentoring, peer coaching, and learning communities are common and found in schools across the nation.

Teacher support systems: Induction. Teacher induction is generally defined as support, guidance, and development provided to novice teachers early in their careers (Cherubini, 2007). Induction programs arose from high rates of attrition in the teaching field (Ingersoll, 2001). Initial induction programs were purposeless and without direction. Induction programs, historically consisted of school principals handing new teachers a key to the classroom and a textbook Teague & Swan, 2013). Some first year teachers

characterized their experience as trial by fire. Furthermore, novice teachers were saddled with the same responsibilities and outcome expectations as veteran teachers. Black (2004) argued that first year teachers should be looked upon as a work in progress rather than a finished product that has the skill and resolve of a veteran teacher. Induction programs have evolved due to attrition rates being the highest among teachers who are in the first five years of teaching. The induction of beginning teachers can be instrumental in the development of young teachers. Thirty states had formal induction programs to support novice teachers (Abrahms et al., 2008). The teaching profession is complex and can create personal and professional anxiety, particularly for young teachers (Iordanides & Vryoni, 2013).

The basic knowledge provided by teacher education programs to first year teachers was inadequate and not enough to promote teacher efficacy (Stansbury, 2001). These findings were due to the complexity of the profession and the challenges that first year teachers face. New teachers face a variety of problems. First year teachers find adaptation and transition to real school conditions, trouble in lesson planning, implementing instructional strategies, and classroom management as challenges (Iordanides and Vryoni, 2013). As novice teachers struggle, job satisfaction declines and young teachers are more apt to leave the profession. Due to retirements during the last decade the future belongs to the next generation of teachers. New teachers are a precious resource and need to be provided with appropriate support during their first year of teaching (Diment, Ellins, Haggarty, & Postlethwaite, 2011).

Current research literature has identified components of successful induction programs. The most successful induction programs respond to the varying backgrounds

of students and teachers and also respect and have an appreciation of the first year teachers' understanding of what it means to be a teacher (Cherubini, 2007). Teacher induction programs must attend to the various needs of the teacher as well. Instructional, professional, cultural, and political needs have to be considered as teacher induction takes place (Bartell, 2005). Instructional performance is key to helping students learn and grow. The ability to plan, instruct and assess a lesson is an essential part of any successful teacher. Building professional culture and collegial collaboration is key for effective induction programs. Building strong school cultures improves retention rates (Daley, 2002).

Induction programs have an impact on teacher retention (Algozzine, Cowan-Hathcock, Gretes and Queen, 2007). Successful induction programs are focused on effective teaching and delivering quality instruction. The more focused the induction program, the higher level of teacher retention. Perceptions of first year teachers on the effectiveness of induction programs emphasized the importance of instructional support, in turn first year teachers reported they were more likely to return the following school year (Algozzine, et al., 2007; Teague & Swan, 2013). Clear and explicit communication about the goals of induction was found to be an important component of successful induction programs. Novice teachers felt that goals and expectations of the induction and orientation program were critical to their success as an educator and were more apt to remain in their current teaching position for the upcoming year.

The first years of teaching are some of the most difficult years for teachers. Induction programs were designed to support novice teachers due to teacher attrition being the highest during the first five years of teaching. Initially, early induction

programs were ineffective and roughly constructed. As teacher induction has evolved over the years so to has the programs effectiveness. Some successful induction programs have been found to yield higher levels of teacher retention (Algozzine, Cowan-Hathcock, Gretes, & Queen, 2007).

Teacher support systems: Mentoring. Mentoring consists of structured guidance as well as regular and ongoing support for teachers, especially beginning teachers, that are designed to help the teachers continue to improve their practice of teaching and to develop their instructional skills. Formal teacher mentoring programs have been in existence for about the last 33 years (Lataille, 2005). As teacher retention and attrition becomes more acute, it is of the utmost importance that educators and school districts look at teacher mentoring programs. According to the Virginia Department of Education (2016) specifically designed teacher mentoring programs can positively impact teacher retention, teacher recruitment, and grow teacher leaders. Teacher mentor programs not only focus on novice teachers but also help teachers who change grade levels or teaching assignments (Lataille, 2005).

Many school districts across the United States have mentoring programs in place, however most mentoring programs are ineffective due to lack of resources to train mentor teachers (Hall, Hughes, & Thelk, 2017). Accordingly, variables that affect mentor programs are; mentor-mentee relationships, mentor values and beliefs, and mentor's instructional expertise.

Research suggests that curriculum, specific mentoring training, and accepted roles enhance the effectiveness of the mentoring program (Hall et al., 2017; Rodgers & Skelton, 2014; Hudson & Hudson, 2016). Mentoring training that increases mentor

effectiveness is paramount to a strong mentoring program. Well-developed mentoring programs focused on proper training of selected mentors, provide novice teachers with the support to become effective and maintain their effectiveness in the classroom (Wong & Wong, 2012). Curriculum, specific training, and accepted roles enhance the effectiveness of the mentoring program (Hall et al., 2017; Rodgers & Skelton, 2014; Hudson & Hudson, 2016). One example of a mentoring program is the Mentoring Beginning Teacher (MBT) program, which was developed in Australia. The MBT program developed a mentor booklet that had clear guidelines (Hudson & Hudson, 2016). The program was established to train mentor teachers. The mentor teachers met as a group in nine different sessions. Each session had a specific topic that was covered both in the session and in the mentor booklet. A key element of the BMT program was the relationship between the mentor and the mentee (Hudson & Hudson, 2016). Mentor programs in which teachers are highly trained through mentor curriculum have experienced success. Mentor curriculums that are designed and focused on the development of mentors are the most effective. Mentors are trained to be effective communicators, trustworthy, non-judgmental, empathetic, and respectful. The mentor must be able to give meaningful feedback and promote self-reflection (Hall et al., 2017). The impact of explicit teacher mentor programs on teacher retention is clear.

Support through mentoring of beginning teachers has a positive impact on beginning teacher commitment to the teaching profession and retention (Ingersoll & Strong, 2004). However, in a sample of large, urban, and low-income schools there was no effect on teacher retention partly due to a lack of formality. Well-planned mentor programs tend to create teacher efficacy. Mentorship programs having a designed

curriculum improve self-efficacy amongst teacher mentees (Hall et al., 2017). In turn, teachers with higher self-efficacy have a higher teacher retention rate than those beginning teachers that have low self-efficacy. Novice teachers require support and the experience from veteran teachers to grow as educators. As novice teachers grow and thrive in a school district, the district's retention rates rise as well (Rodgers & Skelton, 2014).

Well-planned teacher mentoring programs help to recruit teachers as well as improve teacher retention (Ingersoll & Strong, 2011). Mentoring is essential to becoming a lifelong learner throughout an educational system. Lifelong learning developed by mentoring builds a culture through professional development and teamwork (Rodgers & Skelton, 2014). Teacher efficacy improves as teachers take part in formal mentoring programs where teachers work and learn together. Efficacious teachers are more likely to remain with a school district where they feel supported and encouraged.

Teacher support systems: Peer Coaching. Peer coaching is defined as a professional development strategy that improves teaching skills as teachers work with one or more colleagues aimed at specific instructional goals (Hall & McKeen, 1989). Peer coaching is viewed as an effective teacher professional development activity (Cotabish & Benson, 2014). Teaching and learning cannot be conducted in a vacuum. Professionals working and learning from each other and together are more likely to yield student success. Teaching has a social aspect that cannot be understated. Learning is a social event and does not happen without participation (Wegner, 2006). Teachers develop through collegiality and collaboration practices (De Lay & Washburn, 2013). Teachers become empowered and have greater confidence in their teaching when professional

development has components of observation, peer support, and peer feedback (Nushimura, 2014).

Peer coaching emerged as an effective teacher support system in the 1980's (Joyce and Showers, 1980). It was concluded that teachers needed practice in simulated situations followed by practice in the classroom and provided feedback. From this premise, peer coaching emerged as training model that increased teacher efficacy. Peer coaching became more effective as the school system evolved into a community of learners (Joyce and Showers, 1980). As peer coaching evolved it morphed into a model of delivering professional development used to improve instructional practice. As peers worked together classroom instruction and strategies were the main focus. However, it was clear that peer coaching was not to be used as an evaluation tool (Joyce and Showers, 1996). Peer coaching enhances a teacher's awareness of personal strengths as well as an acceptance of new strategies by collaborating with others (Simmons & Slater, 2001). Both teacher products and knowledge are constructed as educators work together through collaborative practices (De Lay & Washburn, 2013).

An important component to peer coaching is the ability for each teacher in the peer coaching model to be able to openly collaborate. Peer coaching must be consistent and ongoing. Consistent and collaborative planning must take place every week to be sustainable (Bauwens & Hourcade, 1996). Collaboration occurs throughout a teacher's career. The ability to collaborate can allow teachers to become reflective about their practice. This is known as reflective reciprocal peer coaching. Reflective reciprocal peer coaching allows the participants to engage in ongoing reflection of teaching practice. During reflective peer coaching, teachers meet and discuss each other's instructional

components as well as reviewing and revising their own teaching (Gonen, 2016). By its' nature, peer coaching is not evaluative. In some cases feedback from a supervisor solicits feelings of that are evaluative and not collaborative by the teacher. Teachers in collaborative settings are more satisfied than those in authoritative settings. Due to the highly collaborative nature of peer coaching, feedback from coaches is received in a more collaborative manner than receiving feedback from an authoritative figure (Topping, 2005).

Current literature has created an unclear picture on the impact of peer coaching on teacher retention. While peer coaching is a viable professional development tool that improves instruction, it has not been found to be universally successful (Perkins, 1998). Communication is a key component for successful peer coaching systems. A lack of proper communication skills by any participant in a peer coaching model alters the success of peer coaching. Due to the needed communication skills of peer coaching that some teachers lacked the skills required for peer coaching (Perkins, 1998). Peer coaching has an impact on teacher efficacy. Needed collaboration of peer coaching increases teacher career satisfaction and a teacher's professional investment. Teachers see their teaching and their contributions to the system as an important component to the larger mission (De Lay & Washburn, 2013). Teacher satisfaction is an element affecting teacher retention as stated earlier. Collaboration impacts job satisfaction through socialization. Socialization removes personal and professionals challenges therefore improving satisfaction. While researchers have highlighted the impact of peer coaching as a collegial process, the impact of peer coaching on teacher retention remains ambiguous (Gonen, 2016).

Teacher support systems: Professional Learning Communities. Professional Learning communities are a group of educators that meet regularly to collaborate on instructional strategies, student work and curriculum. Learning communities share values and beliefs about the system they teach in and teaching in general. “The most promising strategy for sustained, substantive school improvement is developing the ability of school personnel to function as professional learning communities” (DuFour & Eaker, 1998, p. xi). A professional learning community has a singular focus of improving student learning. Classroom instruction and assessment are two facets that professional learning communities study to improve student learning. Most schools in the United States are using some form of a professional learning community to improve opportunities for students to learn (Penny & Sims, 2015). Professional learning communities have been used as a professional development model since the mid-1990s. A professional learning community is focused on, and committed to each student’s learning (DuFour, DuFour, Eaker, & Many, 2010). Professional learning communities include a pattern of accepted adult behavior (Dharm-tad-sa-na-non, Erawan, & Sompong, 2015). Professional learning communities are composed of members that are open to sharing and having discussion on best practices. Members are not afraid to ask questions of one another and also not afraid to be critiqued. Professional learning community members must be able to reflect and collaborate.

Professional learning communities are highly collaborative by nature. Members of professional learning communities work interdependently to improve student achievement. According to Bulkey and Hicks (2005) professional learning communities consist of five common elements: (1) PLC’s have shared norms and values, (2) PLC’s

primary focus is on student learning, (3) PLC's are collaborative, (4) instructional practice in a PLC is public, and (5) PLC's include reflective dialogue. Although many schools have small groups of teachers working together, they are not operating as a learning community (Lick & Murphy, 2005). Professional learning communities involve all teachers within a system. Whole Faculty Study Groups, more commonly known as WFSG's are a form of a learning community in which all teachers are included (Lick & Murphy, 2005).

Collaboration in professional learning communities should provide powerful opportunities for adult learning. However, building a foundation for professional learning communities to be difficult (Bolam, McMahon, Stoll, Thomas, & Wallace, 2006). In some cases outside influences stymie the process of building a professional learning community. Differences in individual teacher core beliefs and value as well as group dynamics can limit the potential of the professional learning community (Meirink & Sjoer, 2016). One reason for the failure of a professional learning community is terminology (Penny & Sims, 2014). A professional learning community is not a program, meeting, or book club (DuFour, DuFour, & Eaker, 2010). Accordingly, many school districts call every teacher gathering a professional learning community. Without intentional focus on the improvement of student learning the professional learning community becomes an ineffective professional development model. Teachers who participate in a district led professional learning community rather than a school building led professional learning community feel the professional learning community has no positive or negative effect on teaching or student achievement (Penny & Sims, 2004).

Professional learning community research exposed both successful and unsuccessful professional learning community models.

Unlike other teacher support systems that arose in part due to teacher attrition, retention, or teacher shortages, professional learning communities arose due to a demand to increase student achievement and improve instructional practice. However, successful learning communities create a positive, interactive environment where teachers report feeling more effective and more positive about being a teacher (Brooks & Oliver, 2002). Learning communities create teacher efficacy and the belief amongst teachers that they can meet their students' needs (Hicks, 2007). As research has shown an increase in teacher efficacy can lead to teacher satisfaction. Teacher satisfaction is a characteristic of teacher retention. However, there seems to be contrasting research on the practice of professional development in the form of a professional learning community and its' impact on teacher retention.

Summary

Teacher retention continues to be a struggle for school systems in the United States. Over the past century school districts have had an increasingly difficult time retaining teachers. It is estimated that over 500,000 teachers leave their teaching position annually (Knauer, 2014).

Teacher characteristics influence a teacher's decision to leave the profession. Characteristics such as: age, gender, ethnicity, content and grade level assignment and a teacher's level of academic achievement impact an individual's desire to stay in the profession of teaching. Commonly, older teachers leave teaching due to retirement. Young teachers, within the first five years of teaching, leave for a variety of reasons.

Women compose a larger percentage of the teaching workforce yet are more likely to leave their teaching post than their male counterparts. White teachers are 1.36 more likely to leave teaching than non-white teachers. Content area assignments may influence teacher retention. The areas of special education, mathematics and science have lower retention rates than other content areas. Mathematics and science teachers leave education mostly due to the availability of career opportunities that offer higher salary. Teacher retention is influenced by grade level assignment. Teachers teaching at the secondary level leave teaching at a higher rate than elementary teachers (Hughes, 2012). Teachers who have a higher measured academic aptitude are more likely leave teaching than those who have a lower academic aptitude.

Teacher retention is impacted by a school's organizational makeup. In some cases organizational factors influence the teacher's job satisfaction. Salary/compensation, student discipline problems and achievement, leadership/administration support, and school facilities/resources are all organizational factors that have an effect on teacher retention. Compensation and associated benefits, loan forgiveness and teacher scholarship have been found to have a correlation with teacher job satisfaction. In a comparison between lower salaried systems (parochial) and higher salaried systems (public) parochial teachers left teaching at a higher rate than public school teachers. Teachers leave education due to student behavior, discipline, motivation and achievement. Research suggests that there is less teacher turnover in schools that are high performing and students are motivated. Leadership has a strong impact on teacher retention (Imig, Ndoye, & Parker, 2009). Leadership and administrative support impact a teacher's willingness in the profession. Teacher retention rates were higher at schools

where administrators practiced servant leadership. Schools where teachers felt a lack of support from administrators had lower teacher retention rates. Lastly, teachers are more likely to leave teaching if they work in subpar facilities and lack proper resources.

Teacher retention is directly related to job satisfaction and teacher efficacy. Teacher efficacy is defined as an intrinsic belief in a teacher's capabilities to bring about the necessary outcomes of student engagement and learning, even among the most hard to reach student (Hoy, Hoy, & Tschannen-Moran, 1998). Efficacy leads to greater satisfaction; greater satisfaction leads to better teacher retention rates. Most teacher support systems provide a system of collaboration so teachers can become more effective. Teachers who become more effective educators also build their efficacy.

Teacher support systems were developed partly due to teacher attrition and poor teacher retention. Research supports that teacher support systems have a positive impact on teachers and students. The process of adult learning and the transferring of learning is at the heart of developing teacher competency (Cocking, Bransford, & Brown, 2000). Teacher support systems have been found to positively affect teacher efficacy and job satisfaction. However, research is vague and lacking on the direct impact teacher support systems may have on teacher retention. Induction, mentoring, peer coaching and professional learning communities were four teacher support systems researched in this literature review.

Teacher induction programs were developed due to high rates of teacher attrition. Early induction programs were ineffective. As teacher induction became more systematic and better developed so did the results. The most successful induction programs respond to the varying backgrounds of students and teachers, and have respect and appreciation

for the first year teachers' understanding of what it means to be a teacher (Cherubini, 2007). Successful induction programs can positively impact teacher retention.

Teacher mentoring programs have been in existence for a little over 30 years. Mentoring programs that are specifically designed can positively impact teacher retention. Selection and training of mentor teachers is a key element to the success of a mentoring program. Mentoring that has specific curriculum improves the efficacy of the teachers in the program. Mentoring is a common professional development practice in many school districts. The degree with which the mentoring program is successful is dependent on the formality of the program. The more formal and organized the program is the better the results.

Peer coaching is viewed as an effective teacher professional development activity (Cotabish & Benson, 2014). In the 1980's peer coaching emerged as a teacher support system. Peer coaching allowed teachers to practice in simulated situations, practice in classrooms, and were provided feedback. In a peer coaching model teaching skills improve as teachers work with a peer or colleague focused on instructional goals. Successful peer coaching models are characterized by high levels of collegial collaboration sessions that are consistent and ongoing. Peer coaching has been found to impact teacher efficacy and teacher satisfaction.

Professional learning communities have been used as a professional development model since the mid-1990's. Professional learning communities are focused on student learning. Professional learning communities are highly collaborative predicated on a set of shared norms and values. While induction, mentoring and peer coaching arose in part to teacher attrition and retention, professional learning communities arose from a demand

to improve student achievement through improved instructional practice. Professional learning communities properly developed can influence teacher efficacy and teacher retention. Learning communities create teacher efficacy and the belief amongst teachers that they can meet their students' needs (Hicks, 2007).

Purpose of Study

The purpose of this quantitative study was to examine the relationship between teacher support systems and teacher retention in rural Nebraska schools. Nebraska rural schools often have a difficult time recruiting and retaining qualified teachers. Most Nebraska rural schools have one or more teacher support systems in place to help develop teachers. Due to resources and location those teacher support systems may be less developed and formalized. Teacher support systems for this study were be categorized into four composite variables: induction programs, mentoring, peer coaching, and learning communities.

Research Questions:

1. Is there a variable within each composite variable that is statistically significant in predicting a school's teacher support models' quality?
2. Which teacher support system is the best predictor of teacher retention in rural Nebraska schools?
3. What variables within the complete conceptual model are statistically significant in predicting teacher retention?

CHAPTER 3: METHODOLOGY

Overview

The purpose of this study was to examine the impact that selected teacher support systems might have as predictors of teacher retention in rural Nebraska schools. Teacher support systems are categorized into four areas: induction programs, mentoring, peer coaching, and learning communities. For the purpose of this study, teacher retention is defined as teachers staying in a school district from one year to the next. Chapter 2 focused on the historical perspective of teacher retention and teacher support systems. It should be noted that while there is a preponderance of research literature associated with teacher support systems impact and effect on classroom instruction and student achievement, little research exists on teacher support systems impact and effect on teacher retention. This study was chosen to add a component of literature due to the lack of research on teacher support systems impact and effect on teacher retention.

Chapter three describes the research design and data collection instrument that was used to determine whether an association exists between the four independent variables (induction programs, mentoring, peer coaching, and professional learning communities) and one dependent variable (teacher retention) as they apply to rural Nebraska public schools.

Research Questions

This study was guided by the following research questions:

1. Is there a variable within each composite variable that is statistically significant in predicting a school's teacher support models' quality?

$$Y'_{induction} = A + b_{instructional\ strategies}X_1 + b_{professional\ responsibilities}X_2 + b_{building\ culture}X_3$$

$Y'_{mentoring}=A + b_{instructional\ strategies}X_1 + b_{mentoring\ training}X_2 + b_{collaboration}X_3 + b_{building\ culture}X_4$

$Y'_{peer\ coaching}=A + b_{instructional\ strategies}X_1 + b_{professional\ responsiblities}X_2 + b_{collaboration}X_3$

$Y'_{plc}=A + b_{instructional\ strategies}X_1 + b_{collaboration}X_2 + b_{building\ culture}X_3$

$H_{0\ induction}: b_{instructional\ strategies}=0\ b_{professional\ responsibilities}=0\ b_{building\ culture}=0$

$H_{0\ mentoring}: b_{instructional\ strategies}=0\ b_{mentoring\ training}=0\ b_{collaboration}=0\ b_{building\ culture}=0$

$H_{0\ peer\ coaching}: b_{instructional\ strategies}=0\ b_{professional\ responsibilities}=0\ b_{collaboration}=0$

$H_{0\ plc}: b_{instructional\ strategies}=0\ b_{collaboration}=0\ b_{building\ culture}=0$

$H_{1\ induction}: b_{instructional\ strategies}\neq 0\ b_{professional\ responsibilities}\neq 0\ b_{building\ culture}\neq 0$

$H_{1\ mentoring}: b_{instructional\ strategies}\neq 0\ b_{mentoring\ training}\neq 0\ b_{collaboration}=0\ b_{building\ culture}\neq 0$

$H_{1\ peer\ coaching}: b_{instructional\ strategies}\neq 0\ b_{professional\ responsibilities}\neq 0\ b_{collaboration}\neq 0$

$H_{1\ plc}: b_{instructional\ strategies}\neq 0\ b_{collaboration}\neq 0\ b_{building\ culture}\neq 0$

Where Y' is the predicted value of Y and A is the value of Y' when all Xs are zero. $b_{instructional\ strategies,}\ b_{professional\ responsibilities,}\ b_{collaboration,}\ b_{mentor\ training,}\ b_{building\ culture}$ represent regression coefficients and X_1, X_2, X_3, and X_4 represent the independent variables. The null hypothesis is represented by H_0 and the hypothesis is represented by H_1 (Tanner, 2012).

2. Which teacher support system is the best predictor of teacher retention in rural Nebraska schools?

$Y'_{teacher\ retention}=A + \beta_{induction}X_1 + \beta_{mentoring}X_2 + \beta_{peer\ coaching}X_3 + \beta_{plc}X_4$

$H_{0\ teacher\ retention}: \beta_{induction}=0\ \beta_{mentoring}=0\ \beta_{peer\ coaching}=0\ \beta_{plc}=0$

$H_{1\ teacher\ retention}: \beta_{induction}\neq 0\ \beta_{mentoring}\neq 0\ \beta_{peer\ coaching}\neq 0\ \beta_{plc}\neq 0$

Where Y' is the predicted value of Y and A is the value of Y' when all Xs are zero. $\beta_{induction}, \beta_{mentoring}, \beta_{peer\ coaching}, \beta_{plc}$ represent regression coefficients and $X_1, X_2, X_3,$ and X_4 represent the independent variables. The null hypothesis is represented by H_0 and the hypothesis is represented by H_1 (Tanner, 2012).

3. What variables within the complete conceptual model are statistically significant in predicting teacher retention?

   $Y'_{teacher\ retention} = A + b_{instructional\ strategies}X_1 + b_{professional\ responsibilities}X_2 + b_{collaboration}X_3 + b_{building\ culture}X_4 + b_{mentor\ training}X_5$

   $H_{0\ teacher\ retention}$: $b_{instructional\ strategies}=0$ $b_{professional\ responsibilities}=0$ $b_{collaboration}=0$ $b_{building\ culture}=0$ $b_{mentor\ training}=0$

   $H_{1\ teacher\ retention}$: $b_{instructional\ strategies}\neq0$ $b_{professional\ responsibilities}\neq0$ $b_{collaboration}\neq0$ $b_{building\ culture}\neq0$ $b_{mentor\ training}\neq0$

   Where Y' is the predicted value of Y and A is the value of Y' when all Xs are zero. $b_{instructional\ strategies}, b_{professional\ responsibilities}, b_{collaboration}, b_{mentor\ training}, b_{building\ culture}$ represent regression coefficients and X_1, X_2, X_3, X_4 and X_5 represent the independent variables. The null hypothesis is represented by H_0 and the hypothesis is represented by H_1 (Tanner, 2012).

Methodology

The nature of the research questions indicate a correlational approach with a predictive design, so a multiple regression process was conducted to explore the relationship of four predictive variables as they relate to the dependent variable of this quantitative study, teacher retention. A multiple linear regression allows the researcher to use multiple predictor variables in pursuance of a more accurate prediction of the

criterion variable (Tanner, 2012). The researcher used a multiple regression to analyze the contribution of each predictor variable on the independent variable.

Participants

For the purpose of this study, the population included rural Nebraska public schools. The population was defined by the Nebraska School Activities Association 3-grade enrollment used for activity classifications for the 2017-2018 school year. The 3-grade enrollment consists of 9th, 10th, and 11th grade students. Nebraska school districts with a 3-grade enrollment of 110 or less were included in the sample. For the 2017-2018 school year 180 Nebraska school districts had a 3-grade enrollment of 110 or less. Of the 180 school districts 21 were considered parochial or private schools and were eliminated. Of the remaining 159 school districts 8 had a different superintendent for the 2018-2019 school year and were eliminated leaving 151 surveys emailed. Of the 151 surveys emailed, 83 surveys were complete. The sample was represented by 83 school districts (n=83). The sample population represents 54.9% of the total population.

Participation in the Study

Participation in this study was voluntary. Each sample school district's representative (Superintendent) was surveyed through a questionnaire instrument. The questionnaire request was submitted via email. Because each district was selected based on specific enrollment data from the 2017-2018 school year, respondents will not be guaranteed total anonymity, however no superintendents or school districts were named. The researcher protected the confidentiality of each district and superintendent. An introduction letter to the questionnaire was emailed to the participants prior to the survey

(Appendix A). Doane University's Institutional Review Board (IRB) procedures were followed.

Instrument

A questionnaire (Appendix B) was chosen as the most effective way to contact the sample located across Nebraska. The researcher designed the questionnaire. Each superintendent serving a school district in the sample received a cover letter and questionnaire via email. Survey participants were given three weeks to complete the survey online. Follow up emails were made with superintendents in the sample who had not responded to the survey to ensure that as many surveys as possible were returned. The survey was a self-administered survey. The questionnaire was web-based and the Internet link was provided to each participant for the survey. Respondent answers on the questionnaire were drawn from data from the 2017-2018 school year. The questionnaire was divided into two parts.

The first section of the questionnaire asked specific student enrollment, teacher retention and attrition data. The items include the following:

1. K-12 Enrollment
2. Total number of certificated non-supervisory staff for the 2017-2018 school year
3. Total number of certificated non-supervisory staff who resigned their teaching position due to retirement following the 2017-2018 school year
4. Total number of certificated non-supervisory staff who resigned their teaching position for reasons other than retirement following the 2017-2018 school year

(Appendix C) represents the second section of the questionnaire that asked each respondent to select a frequency level or a likert-type level associated with a component of each teacher support system. The frequency scales and Likert-type scales in this study were used to gather data from the participating superintendents in the form of a questionnaire.

The second section of the questionnaire contained 32 closed response formatted statements. This section of the questionnaire was designed to measure the four teacher support systems (induction, mentoring, peer coaching and professional learning communities) as well the identified components (instructional strategies, professional responsibilities, collaboration, building culture, and mentor training) of each teacher support system. Statements #5 through #19 measured responses on a 5-point frequency scale ranging from “Never” to “More than once per month”. Statements #20 through #36 measured responses on a 5-point likert scale ranging from “Strongly Disagree” to “Strongly Agree”.

Survey Pilot Testing

Prior to sending out the survey instrument to the study participants, the researcher sent the survey to three individuals. The individuals received the survey and letter explaining the process of data collection the research was trying to accomplish. These individuals were asked to complete the online survey and to also give feedback in regards to the clarity and appropriateness of each survey question. They were also asked to provide any further feedback that could help the process in gathering information for this research. Feedback from the pilot study resulted in no changes to the survey.

Limitations and Delimitations

Due to the ambiguous nature of teacher retention and teacher support systems several limitations were present. Teacher migration and teacher retirement were defined and differentiated accordingly to delimit the collected data. The researcher defined teacher retention, teacher migration, and teacher retirement so that there was an accurate representation of the data.

Further limitations to this study included varied interpretations of teacher support systems, the level of honesty and return rates of respondents. To delimit the data collection the researcher created a consistent and clear instrument with concise instructions. The researcher conducted a follow-up by email with participants who had not responded in an attempt to increase return rates.

Data Collection

The questionnaire was administered digitally using the online survey site, SurveyMonkey.com. Data was collected anonymously through SurveyMonkey.com. SurveyMonkey.com creates an anonymous environment for data collection. Data collection did not occur through face-to-face communication to ensure that the researcher did not persuade the respondents by elaborating through conversation or explanation. Participants were reminded twice via email during a three-week window to complete the survey. All participants responded to the same set of instructions and questionnaire.

To ensure the response rate was adequate for a normal distribution during data analysis, the surveys were open to the selected superintendents within Nebraska during a three-week period. The questionnaire did not collect identifiable demographic information such as names, address, race, etc. The questionnaire asked superintendents for 2017-2018 school enrollment, number of non-supervisory certificated staff, number of

non-supervisory certificated staff retirements and number of non-supervisory certificated staff resignations minus retirements.

Data Analysis

Data from the questionnaire was transferred to the Statistical Package for Social Sciences version 24 (SPSS v24) computer program. This quantitative study using archival data was analyzed by conducting a multiple linear regression. According to Field (2009), "Regression Analysis enables us to predict future outcomes based on the predictor variables" (p. 198). Conducting descriptive and correlation analysis to find the significance of the predictor variables on their contribution to the criterion variable addressed the research questions. The data obtained from the survey was sorted and entered into the SPSS v24 computer program.

Mean imputation was implemented to address any missing data associated with each independent variable as well as each component for the independent variables. For the statistical analysis that included school enrollment, number of non-supervisory certificated staff, number of non-supervisory certificated staff retirements and number of non-supervisory certificated staff resignations for other reasons than retirement cases with missing data were removed from the dataset. Scale scores for all composite and component variables were standardized by z score computation. Standard z scores allowed composite and component variables to have the same "weight" regardless of the number of responses.

The means and standard deviations were calculated for teacher retention, induction, mentoring, peer coaching and professional learning communities. The skewness and kurtosis was checked for normality for each variable. Generally, the ideal

range for skewness and kurtosis is +1 to -1. However, normality was set with an acceptable range of +2 to -2 due to a departure of strict normality (Tanner 2012). Histogram and scatterplots of the collected data were completed. Scatterplots were analyzed and examined to see if a linear line of strength was present or if the scatterplots were unrelated to the dependent variable.

Cronbach's alpha was selected to measure the internal reliability of each composite and component variable. Three multiple linear regressions were conducted to examine the research questions. A multiple regression analysis was conducted to determine if the selected component variables were significant predictors of the four composite variables. Multiple regression was also used to examine the relationship of composite variables and the dependent variable (teacher retention). The last multiple regression examined the relationship of each component variable with the entire theoretical framework. The alpha level for the regression coefficients (β) of the predictor variables was set at 0.05 (α).

Research Questions:

1. Is there a variable within each composite variable that is statistically significant in predicting a school's teacher support models' quality?
2. Which teacher support system is the best predictor of teacher retention in rural Nebraska schools?
3. What variables within the complete conceptual model are statistically significant in predicting teacher retention?

Summary

Chapter three describes the methodology used to investigate the prediction of retention from the information gleaned regarding teacher support. The chapter describes the principle quantitative statistics that was used in the study: a multiple linear regression. All criterion variables (induction programs, mentoring, peer coaching, and professional learning communities) were associated with the single criterion variable (teacher retention) using a multiple linear regression.

A questionnaire was developed and used to collect data. The questionnaire was designed by the researcher. Participants completed the questionnaire using 2017-2018 archival data. The Statistical Package for Social Sciences was used to analyze the data to show whether a statistical significance exists. The results from the analyses are reported on in Chapter 4.

CHAPTER 4: RESULTS

The purpose of this quantitative multiple regression study was to determine what teacher support systems predict teacher retention in rural Nebraska schools. The study used survey data collected from school superintendents within Nebraska and analyzed the collected survey data using quantitative research methodology. The Teacher Support System Measurement questionnaire was developed and used for this study. Eighty-three superintendents completed all sections of the questionnaire, including demography questions.

Chapter 4 begins with the research questions for this study. Descriptive statistics, internal reliability of the instrument, and regression analysis for each research question follows. SPSS version 24.0 was used for the descriptive and inferential analyses. A summary of the results concludes the chapter.

Research Questions

1. Is there a variable within each composite variable that is statistically significant in predicting a school's teacher support models' quality?
2. Which teacher support system is the best predictor of teacher retention in rural Nebraska schools?
3. What variables within the complete conceptual model are statistically significant in predicting teacher retention?

Description of Sample

The population targeted in this study was rural school superintendents within the state of Nebraska who volunteered to participate in the research by taking the survey. The

study did not intentionally limit participants based on their perceived current school setting. Instead, the survey gathered information from all participants on their perceived current teacher support systems as to learn from participants the impact and effect of those teacher support systems on teacher retention.

The survey was sent out to 151 school superintendents who were administrators in the smallest school districts in the state of Nebraska. The Nebraska Schools Activities Association (NSAA) 3-grade enrollment figures were used in selecting the sample. Nebraska school districts with a 3-grade enrollment of 110 or less were included in the sample. For the 2017-2018 school year 180 Nebraska school districts had a 3-grade enrollment of 110 or less. Of the 180 school districts 21 were considered parochial or private schools and were eliminated. Of the remaining 159 school districts 8 had a different superintendent leaving 151 surveyed participants. Of the 151 emails that were sent, there was a response rate of 61%. Approximately 0.1% of the data for non-demographic questions was imputed using the mean of the data set. For the descriptive and inferential analyses of demographic information, cases with missing demographic information were deleted, rather than using a mean replacement. This resulted in 83 completed surveys, which was a 54.9% response rate for analysis involving all information.

Demography Descriptive Statistics. Demographic data were collected on: K-12 enrollment, number of certificated staff who were employed, the number of certificated staff who resigned due to retirement, and the number of certificated staff who resigned for reasons other than retirement. Details of the demographic data are provided in (Table 1).

Table 1

Demographic Variables Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
2017-2018 K-12 enrollment	83	91	632	277.65	103.048
2017-2018 certificated teaching staff	83	18	58	30.85	9.246
2017-2018 retired certificated teaching staff	83	0	4	0.88	0.993
2017-2018 certificated teaching staff resigned other than retirement	83	0	11	2.05	1.880
Retention Rate	83	71%	100%	92.94%	6.267%

Participant (N=83) enrollment ranged from 91 to 632 K-12 students for the 2017-2018 school year (M=277.65, SD=103.048). The data reveal that the number of 2017-2018 certificated teacher staff of the participants has an average of less than 31 teachers (M=30.85, SD=9.246), with a range of 18 to 58. The number of reported retirements from the participants at the conclusion of the 2017-2018 school year was relatively low (M=0.88, SD=0.993). Nearly ninety-two percent (91.6%, n=76) indicated two or less retirements following the 2017-2018 school year. The number of those teachers resigning for reasons other than retirement was higher (M=2.05, SD=1.880). Although the vast majority of those that responded two or fewer resignation other than retirement (72.3%, n=60) as opposed to three or more non-retirement resignations (27.7%, n=23). Retention rate was calculated by subtracting the number of certificated teachers leaving for reasons other than retirement from the number of certificated teaching staff, the product was than divided by the number of certificated teachers less those leaving due to retirement. The average retention rate of the participants (N=83) was 92.94% (M=0.9294, SD=0.06267).

Retention rate had a range of 71% to 100%. The majority of participants had a retention rate of 90% of higher (88.3%, n=65) as opposed to those who had a retention rate of equal to or less than 89% (21.7%, n=18).

Perceptions of Teacher support systems. There were findings within the descriptive statistics with regard to participant perceptions of teacher support systems. Data collected on participant perception on the amount of time spent on the selected support system is provided below (Table 2). When given the statement, "As part of our professional learning community: teachers are provided professional development on curriculum development," respondents reported once per semester or greater (84.3%, n=70). 86.7% of the participants felt that once per semester or more was spent on professional development in regards to the statement, "As part of our professional learning community: teachers are provided professional development on instruction." Some statements concerning the frequency of time associated with peer coaching were inconclusive. 77.1% of participants responded to at least once a semester on the statement, "As part of our peer coaching program: teachers are provided feedback on their instruction." Conversely, when responding to the statement, "As part of our peer coaching program: teachers observe one another in classroom settings," 34.9% of the participants (n=29) responded never. Participants responded similarly to statements on mentoring. 87.9% of participants responded spending once per semester or more to the statement, "As part of our mentoring program: mentors and mentees discuss instructional strategies." When responding to the statement, "As part of our mentoring program: mentors and mentees discus the importance of improving the practice of teaching," 78.3% of the participants (n=65) responded spending a minimum of once per semester.

Table 2

Teacher Support Systems Time Spent Frequency

N=83	Never	Once Per Year	Once Per Semester	Once Per Month	MOPM*
PLC pd curriculum development	3.6%	12%	53%	22.9%	8.4%
PLC pd on instruction	0%	13.3%	34.9%	43.4%	8.4%
Peer coaching feedback on instruction	14.5%	8.4%	39.8%	25.3%	12%
Peer coaching pd design and planning	22.9%	20.5%	30.1%	18.1%	8.4%
Mentoring instructional strategies	4.8%	7.2%	24.1%	33.7%	30.1%
Induction professional responsibilities	0%	31.1%	18.1%	31.3%	19.3%
Induction pd on assessment	6%	25.3%	45.8%	15.7%	7.2%
PLC pd on assessment	7.2%	22.9%	49.4%	16.9%	3.6%
Peer coaching reflection on instruction	15.7%	10.8%	21.7%	32.5%	19.3%
Peer coaching observation	34.9%	25.3%	27.7%	7.2%	4.8%
Peer coaching instructional strategies	12%	20.5%	27.7%	31.3%	8.4%
Mentoring improving practice	10.8%	10.8%	32.5%	28.9%	16.9%
Induction pd on design and planning	16.9%	18.1%	36.1%	22.9%	6%
Induction pd on instruction	7.2%	19.3%	31.3%	33.7%	8.4%

*MOPM=More than once per month

Most statements regarding induction programs had over 75% of participants respond similarly. For instance, 68.9% of participants responded spending at least once per semester when responding to the statement, “As part of our new teacher induction program: new teachers are reminded of the professional responsibilities of teachers.” As well as 68.7% of participants spending at least once per semester to, “As part of our new teacher induction program: new teachers are provided professional development on assessment.”

Respondent data was collected with regards to perception on their agreement with statements concerning teacher support systems in their school districts (Table 3). Some statements concerning teacher support system quality were responded similarly. Nearly 62% of participants agreed or strongly agreed to statements of quality of professional learning communities and teacher induction programs. 56.8% of participants (n=48) agreed or strongly agreed to the statement, “My district has a quality teacher mentoring program. However, when given the statement, “My district has a quality peer coaching program,” participant response was split between strongly disagree and disagree (37.3%, n=31), neither agree or disagree (24.1%, n=20), and agree and strongly agree (38.5%, n-32). A high percentage of participants responded to statements concerning professional learning communities. Over 60% of participants agreed or strongly agreed to statements regarding professional learning communities. 86.8 of participants agreed or strongly agreed to the statement, “Our professional learning community includes support for collaboration.” The highest percentage of participants (24.1%, n=20) strongly agreed to the statement, “Our professional learning community has a primary focus of improving student achievement.” 69.8% of participants agreed or strongly agreed that communication was an effective component of peer coaching programs.

Table 3

Teacher Support Systems Item Frequency

N=83	Strongly Disagree	Disagree	N*	Agree	Strongly Agree
PLC quality	0%	15.7%	22.9%	53%	8.4%
Peer coaching quality	4.8%	32.5%	24.1%	33.7%	4.8%
Mentoring quality	1.2%	18.1%	22.9%	51.8%	6%
Induction quality	0%	13.3%	24.1%	60.2%	2.4%
PLC student achievement	1.2%	2.4%	13.3%	59%	24.1%
PLC norms and values	1.2%	7.2%	25.3%	56.6%	9.6%
PLC reflection dialogue	1.2%	8.4%	28.9%	54.2%	7.2%
PLC collaboration	1.2%	2.4%	9.6%	72.3%	14.5%
Peer coaching feedback	3.6%	16.9%	25.3%	50.6%	3.6%
Peer coaching communication	3.6%	10.8%	15.7%	57.8%	12%
Mentor values and beliefs	0%	10.8%	22.9%	54.2%	12%
Mentor relationships	0%	7.2%	16.9%	57.8%	18.1%
Mentoring includes roles	1.2%	4.8%	20.5%	50.6%	22.9%
Mentoring includes curriculum	7.2%	33.7%	28.9%	21.7%	8.4%
Mentoring training	8.4%	34.9%	26.5%	24.1%	6%
Induction professional responsibilities	0%	9.6%	12%	69.9%	8.4%
Induction collaboration	0%	6%	12%	67.5%	14.5%
Induction goals and expectations	2.4%	12%	27.7%	47%	10.8%

*N=Neither agree or disagree

Participants responded to five statements regarding teacher mentor programs. When given the statement, "An effective component of our mentoring program is formal mentoring training," participants respond of strongly disagree, disagree, or neither agree or disagree (69.8%, n=58). 69.8% of participants also strongly disagreed, disagreed, or neither agreed or disagreed with the statement, "An effective component of our mentoring program is mentor training through an adopted mentor curriculum." Some statements concerning mentoring programs had over 70% of participants respond similarly. For instance, 75.9% of participants strongly agreed or agreed to the statement, "Mentor-mentee relationship is a significant variable in our mentoring system." As well as 73.5% of respondents strongly agreed or agreed to "An effective component of our mentoring program is assignment of mentor and mentee roles." In regards to participant response on teacher induction programs, 87% of participants strongly agreed or agreed to "Our new teacher induction program includes support for collaboration." Furthermore, when given the statement, "Our new teacher induction program includes explanations of professional responsibilities of teachers," participants strongly agreed or agreed (78.3%, n=65).

Table 4

Professional Learning Communities Variables Descriptive Statistics

	Min	Max	Mean	Std. Deviation	Skewness		Kurtosis	
				Statistic	Statistic	Std. Error	Statistic	Std. Error
Instructional Strategies	7.00	20.00	13.564	2.645	0.042	0.264	-0.023	0.523
Collaboration	2.00	10.00	7.544	1.299	-1.278	0.264	3.967	0.523
Building culture	1.00	5.00	3.662	0.800	-0.770	0.264	0.924	0.523

Professional Learning Communities Descriptive Statistics. Professional learning communities data were collected on: instructional strategies, collaboration, and building culture. Details of the variables within Professional Learning Communities data are provided above (Table 4). Descriptive statistics were also calculated for z scores of the variables for Professional Learning Communities (Table 5).

Table 5

Professional Learning Communities Variables Z Scores Descriptive Statistics

	Min	Max	Mean	Std. Deviation	Skewness		Kurtosis	
				Statistic	Statistic	Std. Error	Statistic	Std. Error
ZInstructional Strategies	-2.481	2.432	0.000	1.000	0.042	0.264	-0.023	0.523
ZCollaboration	-4.266	1.889	0.000	1.000	-1.278	0.264	3.967	0.523
ZBuilding Culture	-3.325	1.670	0.000	1.000	-0.770	0.264	0.924	0.523

Table 6

Peer Coaching Variables Descriptive Statistics

	Min	Max	Mean	Std. Deviation	Skewness		Kurtosis	
				Statistic	Statistic	Std. Error	Statistic	Std. Error
Professional Responsibilities	1.00	5.00	3.289	1.330	-0.456	0.264	-0.908	0.523
Collaboration	2.00	10.00	6.975	1.807	-0.979	0.264	0.581	0.523
Instructional strategies	4.00	20.00	11.06	3.848	-0.139	0.264	-0.464	0.523

Table 7

Peer Coaching Variables Z Scores Descriptive Statistics

	Min	Max	Mean	Std. Deviation	Skewness		Kurtosis	
				Statistic	Statistic	Std. Error	Statistic	Std. Error
ZProfessional Responsibilities	-1.721	1.286	0.000	1.000	-0.456	0.264	-0.908	0.523
ZCollaboration	-2.752	1.672	0.000	1.000	-0.979	0.264	0.581	0.523
ZInstructional strategies	-1.835	2.321	0.000	1.000	-0.139	0.264	-0.464	0.523

Table 8

Mentoring Variables Descriptive Statistics

	Min	Max	Mean	Std. Deviation	Skewness		Kurtosis	
				Statistic	Statistic	Std. Error	Statistic	Std. Error
Instructional Strategies	2.00	10.00	7.070	2.082	-0.536	0.264	0.009	0.523
Mentoring Training	4.00	15.00	9.638	2.615	0.138	0.264	-0.595	0.523
Collaboration	2.00	5.00	3.674	0.827	-0.513	0.264	-0.151	0.523
Building culture	2.00	5.00	3.674	0.827	-0.513	0.264	-0.151	0.523

Peer Coaching Descriptive Statistics. Peer coaching data were collected on: professional responsibilities, collaboration, and instructional strategies. Details of the variables within Peer Coaching data are provided above (Table 6). Descriptive statistics were also calculated for z scores of the variables for Peer Coaching (Table 7).

Mentoring Descriptive Statistics. Mentoring data were collected on: instructional strategies, mentoring training, collaboration, and building culture. Details of the variables

within the Mentoring data are provided above (Table 8). Descriptive statistics were also calculated for z scores of the variables for Mentoring (Table 9).

Table 9

Mentoring Variables Z Scores Descriptive Statistics

	Min	Max	Mean	Std. Deviation	Skewness		Kurtosis	
				Statistic	Statistic	Std. Error	Statistic	Std. Error
ZInstructional strategies	-2.434	1.406	0.000	1.000	-0.536	0.264	0.009	0.523
ZMentoring training	-2.155	2.049	0.000	1.000	0.138	0.264	-0.595	0.523
ZCollaboration	-2.022	1.600	0.000	1.000	-0.513	0.264	-0.151	0.523
ZBuilding culture	-2.022	1.600	0.000	1.000	-0.513	0.264	-0.151	0.523

Induction Descriptive Statistics. Induction data were collected on: instructional strategies, professional responsibilities, and building culture. Details of the variables within Induction data are provided below (Table 10). Descriptive statistics were also calculated for z scores of the variables for Induction (Table 11).

Table 10

Induction Variables Descriptive Statistics

	Min	Max	Mean	Std. Deviation	Skewness		Kurtosis	
				Statistic	Statistic	Std. Error	Statistic	Std. Error
Instructional Strategies	3.00	15.00	8.924	2.742	-0.092	0.264	-0.459	0.523
Professional Responsibilities	4.00	10.00	7.154	1.501	-0.139	0.264	-0.592	0.523
Building culture	3.00	10.00	7.421	1.482	-0.649	0.264	1.280	0.523

Table 11

Induction Variables Z Scores Descriptive Statistics

	Min	Max	Mean	Std. Deviation	Skewness		Kurtosis	
				Statistic	Statistic	Std. Error	Statistic	Std. Error
ZInstructional strategies	-2.160	2.215	0.000	1.000	-0.092	0.264	-0.459	0.523
ZProfessional Responsibilities	-2.101	1.895	0.000	1.000	-0.139	0.264	-0.592	0.523
ZBuilding culture	-2.982	1.739	0.000	1.000	-0.649	0.264	1.280	0.523

Composite Variable Descriptive Statistics. Data were collected on the composite variables: Professional Leaning Communities, Peer coaching, Mentoring, and Induction. On the questionnaire, questions 5, 6, 12, and 23 (instructional strategies), questions 25 and 26 (collaboration), question 24 (building culture) and question 19 (quality) were part of the Professional Learning Community composite variable. Question 13, (professional responsibilities), questions 27 and 28 (collaboration), questions 7, 8, 14, 15 (instructional strategies) and question 20 (quality) were part of the Peer coaching composite variable. Question 9 (instructional strategies), questions 31, 32, and 33 (mentor training), question 30 (collaboration), question 16 (professional responsibilities), question 29 (building Culture) and question 21 (quality) were part of the Mentoring composite variable. Questions 11, 17, and 18 (instructional strategies), questions 10, and 34 (professional responsibilities), questions 35 and 36 (building culture) and question 22 (quality) were part of the Induction composite variable. Details of the composite variables are provided below (Table 12). Descriptive statistics were also calculated for z scores of the composite variables (Table 13).

Table 12

Teacher Support Systems Variables Descriptive Statistics

	Min	Max	Mean	Std. Deviation	Skewness		Kurtosis	
				Statistic	Statistic	Std. Error	Statistic	Std. Error
PLC	12.00	40.00	28.313	4.634	-0.454	0.264	1.820	0.523
Peer Coaching	8.00	37.00	24.345	6.880	-0.448	0.264	-0.360	0.523
Mentoring	14.00	39.00	27.685	5.886	-0.291	0.264	-0.152	0.523
Induction	13.00	39.00	27.018	5.552	-0.313	0.264	-0.011	0.523

Table 13

Teacher Support Systems Variables Z Scores Descriptive Statistics

	Min	Max	Mean	Std. Deviation	Skewness		Kurtosis	
				Statistic	Statistic	Std. Error	Statistic	Std. Error
ZPLC	-3.519	2.521	0.000	1.000	-0.454	0.264	1.820	0.523
ZPeer Coaching	-2.375	1.839	0.000	1.000	-0.448	0.264	-0.360	0.523
ZMentoring	-2.324	1.922	0.000	1.000	-0.291	0.264	-0.152	0.523
ZsInduction	-2.524	2.157	0.000	1.000	-0.313	0.264	-0.011	0.523

Table 14

Teacher Support Systems Quality Variables Descriptive Statistics

	Min	Max	Mean	Std. Deviation	Skewness		Kurtosis	
				Statistic	Statistic	Std. Error	Statistic	Std. Error
Quality (PLC)	2.00	5.00	3.542	.859	-0.488	0.264	-0.501	0.523
Quality (PC)	1.00	5.00	3.012	1.029	-0.025	0.264	-0.979	0.523
Quality (M)	1.00	5.00	3.433	.899	-0.569	0.264	-0.437	0.523
Quality (IN)	2.00	5.00	3.518	.754	-0.847	0.264	-0.195	0.523

Teacher Support Systems Quality Variables Descriptive Statistics. Teacher support systems quality data were collected on: professional learning communities, peer coaching, mentoring, and induction. Details of the variables within the teacher support systems quality date are provided above (Table 14).

Findings

Internal Reliability came from Cronbach's Alpha to determine internal consistency and correlations tables were computed to determine strength of correlation between items within variables and composite variables (Table 15). Cronbach's alpha coefficient of 0.70 or higher is considered acceptable internal reliability in research work in the social sciences within item on a scale.

Table 15

Cronbach's Alpha for Variables

	N	Cronbach's Alpha	N of Items
Instructional strategies	83	0.901	12
Professional responsibilities	83	0.687	4
Professional responsibilities No Question 11	83	0.577	3
Professional responsibilities No Question 14	83	0.653	3
Professional responsibilities No Question 17	83	0.685	3
Professional responsibilities No Question 35	83	0.577	3
Building culture	83	0.783	4
Collaboration	83	0.740	5
Mentor training	83	0.826	3
Quality	83	0.737	4
PLC	83	0.858	8
Peer coaching	83	0.895	8
Mentoring	83	0.883	8
Induction	83	0.878	8

The correlation tables of variables with Cronbach's alpha coefficients less than 0.70 were analyzed to determine if a single question had a correlation weakening the reliability and could be eliminated. For example, the Professional responsibilities variable was computed with all questions resulting in a Cronhach's Alpha coefficient of 0.687. It was also computed by removing each question resulting in a Cronbach's Alpha of 0.577, 0.653, 0.685, and 0.577 respectively. There was no removal of questions that resulted in a significant increase to the Cronbach's Alpha coefficient, consequently all items were retained.

Multiple Regression Analysis

Multiple regression analysis was used to determine the relationship between the predictor variables for the four criterion variables (teacher support systems). The predictor variables (instructional strategies, collaboration, and building culture) were analyzed to predict the criterion variable (professional learning communities). The predictor variables (instructional strategies, professional responsibilities, and collaboration) were analyzed to predict the criterion variable (peer coaching). The predictor variables (instructional strategies, mentor training, collaboration, and building culture) were analyzed to predict the criterion variable (mentoring). The predictor variables (instructional strategies, professional responsibilities, and building culture) were analyzed to predict the criterion variable (induction). A multiple regression analysis was also used to determine the relationships among the composite predictor variables (PLC, peer coaching, mentoring, and induction) and the criterion variable (teacher retention). Lastly, a multiple regression analysis was used to determine the relationship with the predictor variables in the complete theoretical model (instructional strategies,

professional responsibilities, building culture, collaboration, and mentor training) and the criterion variable (teacher retention). For the purpose of this study a p-value of less than 0.05 was considered statistically significant. In the area of social sciences the accepted p-value is 0.05.

Question 1. The first research question was, is there a variable within each composite variable that is statistically significant in predicting a school's teacher support models effectiveness? First, the composite variable of PLC, followed by peer coaching, mentoring, and finally induction will be described.

Question 1: PLC Variables Multiple Regression

Table 16

PLC Variables Multiple Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.633[a]	0.400	0.378	0.678

Predictor	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
ZPLC_instructional strategies	0.357	0.090	0.415	3.983	0.000
ZPLC_collaboration	0.279	0.110	0.324	2.530	0.013
ZPLC_building culture	-0.022	0.105	-0.025	-0.0208	0.836

a. Dependent Variable: PLC Quality

A multiple regression analysis was computed to determine if instructional strategies, collaboration, and building culture were statistically significant in predicting

the quality of the teacher support system PLC (Table 16). Overall the variables within PLC account for 37.8% of the variance of the quality of a PLC (adjusted r^2=0.378). The predictor variables instructional strategies (p<0.001) and collaboration (p=0.013) were found to have a statistically significant impact on the quality of a PLC. The building culture variable (p=0.836) was not a significant predictor of PLC quality.

Question 1: Peer coaching Variables Multiple Regression

Table 17

Peer coaching Variables Multiple Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.690[a]	0.476	0.456	0.759

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
ZInstructional strategies	0.081	0.130	0.078	0.623	0.535
ZProfessional responsibilities	0.156	0.118	0.152	1.328	0.188
ZCollaboration	0.556	0.109	0.540	5.090	0.000

a. Dependent Variable: Peer Coaching Quality

A multiple regression analysis was computed to determine if instructional strategies, professional responsibilities, and collaboration impact the quality of peer coaching (Table 17). Overall the variables within peer coaching account for approximately 45.6% of the overall peer coaching model (adjusted r^2=0.456). Collaboration (p<0.001) was found to have a statistically significant impact on the quality

of peer coaching. Instructional strategies was not a significant predictor of peer coaching quality (p=0.535) nor was professional responsibilities (p=0.188).

Another multiple regression analysis was computed to determine if the predictor variables instructional strategies, mentor training, collaboration, and building culture impact the quality of mentoring (Table 18). Overall the variables within mentoring account for 42.3% of the variance overall for mentoring quality (adjusted r^2=0.423). Instructional strategies (p=0.003) and collaboration (p=0.047) were found to have a statistically significant impact on the quality of mentoring. Results show no significant evidence mentor training (p=0.926) and building culture (p=0.092) impact mentoring quality.

Question 1: Mentoring Variables Multiple Regression

Table 18

Mentoring Variables Multiple Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.672[a]	0.451	0.423	0.683

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
	ZscoreInstructional strategies	0.289	0.095	0.322	3.054	0.003
	ZscoreMentor training	0.010	0.108	0.011	0.093	0.926
	ZCollaboration	0.218	0.108	0.242	2.018	0.047
	ZscoreBuilding culture	0.197	0.116	0.219	1.707	0.092

a. Dependent Variable: Mentor Quality

A multiple regression analysis was computed to determine if instructional strategies, professional responsibilities, and building culture impact induction (Table 19). Overall the variables within induction account for approximately 34.8% of the variance of induction (adjusted r^2=0.348). Building culture ($p<0.001$) was found to have a statistically significant on predicting induction quality. Instructional strategies (p=0.375) and professional responsibilities (p=0.538) were found to have no statistically significant impact on the quality of induction.

Question 1: Induction Variables Multiple Regression

Table 19

Induction Variables Multiple Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.610[a]	0.372	0.348	0.609

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
	ZInstructional strategies	0.084	0.094	0.111	0.893	0.375
	ZProfessional responsibilities	0.065	0.105	0.086	0.618	0.538
	ZBuilding culture	0.349	0.104	0.463	3.345	0.001

a. Dependent Variable: Induction Quality

Question 2. The second research question was, which teacher support system is the best predictor of teacher retention in rural Nebraska schools? In order to answer

research question two a multiple regression analysis was computed to determine if PLC, peer coaching, mentoring, or induction predict teacher retention (Table 20).

Question 2: Teacher Retention Variables Multiple Regression

Table 20

Teacher Retention Variables Multiple Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.294[a]	0.087	0.040	0.061%

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
ZPLC	-0.013	0.009	-0.203	-1.409	0.163
ZPeer Coaching	-0.015	0.010	-0.246	-1.600	0.114
ZMentoring	0.005	0.011	0.087	0.497	0.620
ZInduction	0.009	0.013	0.141	0.683	0.496

a. Dependent Variable: Teacher Retention

The composite variables of PLC, peer coaching, mentoring, and induction accounted for approximately 4% of the overall variance of teacher retention (r^2=0.040). Peer coaching (p=0.114) and PLC (p=0.163) were found to be the most related to teacher retention, but were well above the required p-value of 0.05 for establishing statistical significance. Results showed no significant evidence to indicate induction (p=0.496) and mentoring (p=0.620) predict teacher retention.

Question 3. The third research question was, what variables within the complete conceptual model are statistically significant in predicting teacher retention. In order to answer research question three, a multiple regression analysis was computed to determine

if any variables such as: instructional strategies, professional responsibilities, collaboration, building culture, or mentor training impact teacher retention (Table 21). Overall the variables within the complete model when calculated together account for 9.3% of the overall variance of teacher retention (r^2=0.093). Instructional strategies (p=0.003) was found to have a statistically significant impact on teacher retention. Professional responsibilities (p=0.089) fell slightly above the required p-value of 0.05 for statistical significance. Results showed no significant evidence to indicate collaboration (p=0.277), building culture (p=0.494), and mentor training (p=0.651) impact teacher retention.

Question 3: Variables in Complete Model

Table 21

Variables in Complete Model Multiple Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.385[a]	0.149	0.093	0.059%

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
	ZInstructional Strategies	-0.037	0.012	-0.584	-3.045	0.003
	ZProfessional Responsibilities	0.025	0.015	0.400	1.723	0.089
	ZCollaboration	-0.012	0.011	-0.0188	-1.094	0.277
	ZBuilding Culture	0.009	0.013	0.138	0.688	0.494
	ZMentor Training	0.004	0.009	0.066	0.455	0.651

a. Dependent Variable: Teacher Retention

Summary

Chapter 4 presented the quantitative data and results based on the methodology explained in Chapter 3. Chapter 4 began with the research questions for this study. The research study investigated the variables that impact teacher retention in rural Nebraska schools. The description of the population and sample population was included to provide insight and perspective. Results of inferential statistics were included within Chapter 4. Descriptive statistics, internal reliability of the instrument, and regression analysis for each research question follows. Chapter 5 will conclude this research study by discussing the implications of interpretation of the results.

CHAPTER 5: DISCUSSIONS AND CONCLUSIONS

The purpose of this quantitative multiple regression study was to determine what variables impact teacher retention in Nebraska rural schools. The study used survey data collected from rural school district superintendents in Nebraska and analyzed the collected survey data using quantitative research methodology explained in Chapter 3. A survey collecting demographic data and teacher support system data was developed and used for this study. Eighty-three superintendents completed the survey, which provided the data used for this study. The dependent (criterion) variable was teacher retention. The independent (predictor) variables were professional learning community, peer coaching, mentoring, and induction. Multiple regression analysis was also computed to determine the impact of selected component variables on each composite variable (professional learning community, peer coaching, mentoring, and induction). Lastly, multiple regression analysis was computed on the complete theoretical model. Chapter 5 describes the implications and recommendations, conclusions, and summary of the research results. Results from each multiple regression analysis and possible alternative explanations are discussed in the conclusion section along with possible implications.

Summary of Findings

Multiple regression analysis was used to test the hypothesis identified in this study in order to answer the following research questions.

1. Is there a variable within each composite variable that is statistically significant in predicting a school's teacher support models' quality?
2. Which teacher support system is the best predictor of teacher retention in rural Nebraska schools?

3. What variables within the complete conceptual model are statistically significant in predicting teacher retention?

Specific variables within each regression analysis regarding question one were found to be significant predictors of each criterion variable. The results of this study show that predictor variables of instructional strategies ($p<0.001$) and collaboration ($p=0.013$) were statistically significant on impacting professional learning communities. Multiple regression analysis resulted in the predictor variable of collaboration ($p<0.001$) was found to have a statistically significant impact on the quality of peer coaching. Instructional strategies ($p=0.003$) and collaboration ($p=0.047$) were found to have a statistically significant impact on the quality of mentoring. Results of the last regression associated with question one found the predictor variable building culture ($p<0.001$) to be statistically significant on predicting induction quality.

A multiple regression analysis was computed to determine if the composite variables of professional learning communities, peer coaching, mentoring, and induction impact teacher retention. The results of the analysis show no impact in the composite variables on teacher retention. The multiple regression analysis resulted in p-values well above the required 0.05. Professional learning communities ($p=0.163$), peer coaching ($p=0.114$), mentoring ($p=0.620$), and induction ($p=0.496$) were found to have no statistical significance on predicting teacher retention. Furthermore, the composite variables only accounted for approximately 4% of the variance of teacher retention.

Results from the multiple regression analysis computed on the complete theoretical model found that instructional strategies ($p=0.003$) was a statistically significant predictor of teacher retention. Professional responsibilities ($p=0.089$)

approached significance, while collaboration (p=0.277), building culture (p=0.494), and mentor training (p=0.651) were not statistically significant predictors of teacher retention.

Review of Related Literature

The intent of the review of related literature was to define teacher support systems, teacher retention, and to facilitate an investigation into the relationship between teacher retention and identified teacher support system models. The findings of this research support existing studies and create a need to explore future studies. The findings of this study suggest that much of the previous teacher support systems literature can be applied to school districts. This section will address the results of this research, specifically those areas of statistical significance and how the findings connect to the review of literature.

Professional Learning Communities. Professional learning communities are a group of educators that meet regularly to collaborate on instructional strategies, student work and curriculum (DuFour, DuFour, & Eaker, 2010). The literature suggested that the use of instructional strategies is a key component in improving student achievement. Professional learning communities include a pattern of accepted adult behavior (Dharm-tad-sa-na-non, Erawan, & Sompong, 2015). The research in this study confirms existing research and indicates instructional strategies has a significant impact on the quality of a professional learning community. Professional learning communities consist of five common elements: (1) PLC's have shared norms and values, (2) PLC's primary focus is on student learning, (3) PLC's are collaborative, (4) instructional practice in a PLC is public, and (5) PLC's include reflective dialogue (Bulkley and Hicks, 2005). Professional learning communities are highly collaborative by nature. Within this study instructional

strategies ($p<0.001$) and collaboration ($p=0.013$) were found to be statistically significant predictors on the quality of professional learning communities.

Peer Coaching. As discussed in Chapter 2, peer coaching evolved it morphed into a model of delivering professional development used to improve instructional practice. Peer coaching enhances a teacher's awareness of personal strengths as well as an acceptance of new strategies by collaborating with others (Simmons & Slater, 2001). The review of research indicated that collaboration was a key component of successful peer coaching models. Peer coaching must be consistent and ongoing. Consistent and collaborative planning must take place every week to be sustainable (Bauwens & Hourcade, 1996). Within this study collaboration was found to be statistically significant ($p<0.001$).

Mentoring. The composite variable of mentoring had two variables of statistical significance. Instructional strategies ($p=0.003$) and collaboration ($p=0.047$) were found to have a statistically significant impact on the quality of mentoring. Research indicated the necessity of well-planned mentoring programs. Curriculum, specific training, and accepted roles enhance the effectiveness of the mentoring program (Hall et al., 2017; Rodgers & Skelton, 2014; Hudson & Hudson, 2016). Relationships involving collaboration were discovered as important components of mentoring. The (Mentoring Beginning Teacher) MBT program developed a mentor booklet that had clear guidelines (Hudson & Hudson, 2016). The program was established to train mentor teachers. The mentor teachers met as a group in nine different sessions. Each session had a specific topic that was covered both in the session and in the mentor booklet. A key element of

the BMT program was the relationship between the mentor and the mentee (Hudson & Hudson, 2016).

Induction. Teacher induction is generally defined as support, guidance, and development provided to novice teachers early in their careers (Cherubini, 2007). According to previous literature there were several traits of successful teacher induction programs. The variable of building culture was highlighted in the research. Building professional culture and collegial collaboration is key for effective induction programs. Building strong school cultures improves retention rates (Daley, 2002). According to this study, building culture ($p<0.001$) was found to have a significant impact on Induction.

Teacher Retention. According to previous literature teacher retention has been a growing concern school districts across the nation. Annually, approximately 500,000 teachers leave their school district (Boyd, Grossman, Ing, Lankford, Loeb, & Wyckoff, 2011). Novice teachers seem to make up a large percentage of teachers not returning. Estimates of teachers leaving within the first five years of teaching range from 20% to 50% (Catrett, Houchins, & O'Rourke, 2008; Ingersoll & Smith, 2003). However, seasoned teachers leave the field of teaching as well. Accordingly, the loss of both inexperienced and experienced educators results in an annual turnover rate of roughly 13% to 15% (Ingersoll, 2001). Descriptive statistical analysis from this study revealed that the sample population had an average retention rate of 92.9% ($M=0.9294\%$) for the 2017-2018 school year. The data revealed that the number of 2017-2018 certificated teacher staff of the participants had an average of less than 31 teachers ($M=30.85$). The study indicated that the mean of teachers retiring was less than one teacher per respondent school district ($M=0.88$). The average of teachers leaving for other reasons

was twice as high (M=2.05). The sample population (N=83) had approximately 170 certified instructional staff resign their position at the end of the 2017-2018 school year.

Teacher Satisfaction and Efficacy. While teacher satisfaction and efficacy were not variables of this study literature revealed satisfaction and efficacy as having a positive impact on teacher retention. Teacher efficacy is an intrinsic motivator influencing teacher satisfaction. Teacher retention research (Baker, 2007; Arnold & Otto, 2005; Imig, Ndoye, & Parker, 2019; Newton & Shaw, 2014) found that efficacious teachers are have greater levels of job satisfaction which leads to higher levels of teacher retention. The review of literature revealed several teacher support systems having a positive impact on teacher satisfaction. Professional learning communities create teacher efficacy and the belief amongst teachers that they can meet their students' needs (Hicks, 2007). Research revealed that peer coaching increases teacher career satisfaction and a teacher's professional investment. Teachers see their teaching and their contributions to the system as an important component to the larger mission (De Lay & Washburn, 2013). Lastly, the literature unveiled that well-planned mentor programs tend to create teacher efficacy. Mentorship programs having a designed curriculum improve self-efficacy amongst teacher mentees (Hall et al., 2017).

Scope and Limitations

While several component variables impacted the four composite variables significantly, there were also several unanticipated outcomes. For example, the research literature on professional learning communities would suggest building culture would have a significant impact on the quality of a professional learning community and was found not to be significant in this study. Research literature on peer coaching suggested

that instructional strategies and professional responsibilities would have a significant impact on peer coaching and neither were found to be significant. The review of literature on mentoring would suggest mentor training and building culture would have a significant impact on mentoring and both were found to have no significant impact. Induction research suggested that instructional strategies and professional responsibilities would have a significant impact on induction and both were found to have no significant impact.

There were also limitations within the study that may have caused the unexpected outcomes. One limitation created could be the design of the study. This study surveyed 151 Nebraska school superintendents. The selected sample met the researchers rural definition for requirement of an enrollment of 110 students or less based on the Nebraska School Activities Association 3 grade classification for the 2017-2018 school year. The response rate was an exceptional 61% (N=83). However, considering Nebraska is rural state the 151 school districts selected to participate in this study only represent 32% of the 471 school districts in the state of Nebraska. A potential limitation is that only 17.6% of the total population of 471 school districts in the state of Nebraska is represented by this data.

Another possible limitation is the assumption that all the participants responded truthfully to the questionnaire developed for the study. The topics of teacher retention and teacher support systems may be perceived to be topics that are not concerning to school superintendents. However, some superintendents may have answered questions to enhance their perception of their school districts' teacher support system. The chances for

truthful responses were increased due to the respondents' assurance of anonymity and confidentiality that was explained in the questionnaire introduction and informed consent.

Implications

While this study supports and reinforces some components of teacher support system research there is a need to learn more about other components that may impact teacher support systems. The results indicate a strong correlation between the component variables instructional strategies and collaboration on the composite variables professional learning communities and mentoring. The component variable of collaboration also had a significant impact on peer coaching, while induction was significantly impacted by the component variable of building culture. The research study revealed the importance of including specific teacher support system elements such as: instructional strategies and collaboration within professional learning communities and mentoring models.

The research also revealed that of all the component variables; instructional strategies had a statistically significant impact on teacher retention. It is important to note that the variables within the complete theoretical model when calculated together accounted for 9.3% of the overall variance of teacher retention. Nonetheless, the focus on instructional strategies and teacher effectiveness is a key element to the profession of teaching.

The study supported the need to learn more about factors that impact teacher retention. The specific research question involving the impact of teacher support systems on teacher retention was answered with the results of the data analysis. All four composite variables were found to have no significant impact on teacher retention.

However, through the review of literature the composite variables are all effective professional development models.

Recommendations for Future Research

While there is an abundance of individual research on teacher support systems and teacher retention there are opportunities for research around the possible relationship that exist between the two. The current study explored 5 component variables, and 4 composite variables associated with teacher support systems. There are undoubtedly more variables impacting teacher support systems. Also, there are variables that need to broken down further. There are two component variables where ongoing research is needed. The first is instructional strategies and more specifically research on well-defined instructional strategies and their impact on teacher support systems. The other variable is collaboration and the factors of the expected collaboration. These two variables were found to have a significant impact on two or more composite variables and need to be further researched.

Virtually no research exists on impact of teacher support systems on teacher retention. The purpose of this study was to explore the relationship between teacher support systems and teacher retention. Results from a regression analysis reported in Chapter 4 found the selected teacher support systems to have no statistically significant impact on teacher retention. The current study was limited to teacher support system variables and did not include other variables. Literature reviewed revealed several variables impacting teacher retention. Variables such as, age, gender, ethnicity, content and grade level assignment were factors effecting teacher retention. In addition, family situation, occupation of spouse, and geographic location are potential variables for further

consideration. Further research is needed to examine the relationship of all potential variables including teacher support systems and teacher retention.

While the current study provided a reasonable sample size, additional research that includes a more diverse population may be needed. The sample population was limited due to the student enrollment requirements. Research indicated that retention of teachers to be of the utmost importance and a possible concern in both rural and urban schools. Future studies should include both rural and urban schools.

Research revealed that both teacher efficacy and teacher satisfaction had a positive impact on teacher retention. The review of literature also indicated that effective teacher support systems help to build teacher efficacy and aid in teacher satisfaction. It is reasonable to assume that teacher support systems have an indirect effect on teacher retention. Future studies are needed to explore the indirect relationship. Teacher support systems focused on improving classroom instruction are creating a more efficacious teacher. It stands to reason that the more efficacious a teacher is the more likely they are to be satisfied and in turn remain in the teaching profession.

Conclusion

The research study expands the body of research on elements that impact teacher support systems. The quantitative multiple regression design and results of this study provides the opportunity for additional research and studies. The data results contribute to the research by identifying opportunities for additional research in teacher retention.

The current study was conducted in Nebraska with superintendents working in school districts. Superintendents facilitating in school districts with a NSAA 3-grade enrollment of 110 or less were invited to participate in the survey, which was developed

by the researcher specifically for this study. Participation in the study was voluntary. Collected data was analyzed using a multiple regression methodology. A linear multiple regression analysis revealed a statistically significant relationship between the following predictor variables and composite variables: instructional strategies and collaboration on professional learning communities, collaboration on peer coaching, instructional strategies and collaboration on mentoring, and building culture on induction. A second linear multiple regression revealed no statistically significant relationship between the teacher support system predictor variables (professional learning communities, peer coaching, mentoring, and induction) and teacher retention. The last linear multiple regression found a statistically significant relationship between one variable in the complete model (instructional strategies) and teacher retention.

Summary

The topic of teacher support systems has an abundance of research documenting the positive effective of instructional competencies, professional growth, student achievement, high efficacy and teacher satisfaction (Boyd, et al., 2011; Cocking, Bransford, & Brown, 2000; Erickson, 2010; Perrachione, Petersen & Rosser, 2008). This study identified key elements of teacher support systems. The results from this study may be used by school districts to develop quality teacher support systems for their instructional staff.

The results from this study provided answers to the research question by testing the hypotheses. This research offers a basis and direction for future research. Chapter 5 provided a summary of findings, scope and limitations of the study, implications of the study, and recommendations for further research.

The data collected for this research study was used to discover what component variables and composite variables impact teacher retention. Data was also collected to determine what component variables impact the composite variables of teacher support systems (professional learning communities, peer coaching, mentoring, and induction). The data analysis and findings of the study within the limitations and delimitations present the following conclusions in regards to the research questions:

1. Is there a variable within each composite variable that is statistically significant in predicting a school's teacher support models' quality?

The null hypothesis was rejected. Results from the research study found several variables that were statistically significant.

2. Which teacher support system is the best predictor of teacher retention in rural Nebraska schools?

The null hypothesis for question 2 was accepted. Results from the research study found no composite variables that were significant predictors of Teacher Retention.

3. What variables within the complete conceptual model are statistically significant in predicting teacher retention?

With regard to research question 3, the null hypothesis was rejected. The component variable instructional strategies was statistically significant in predicting Teacher Retention.

The topic of teacher support systems has an abundance of research documenting the positive effect of instructional competencies, professional growth, student achievement, high efficacy and teacher satisfaction (Boyd, et al., 2011; Cocking,

Bransford, & Brown, 2000; Erickson, 2010; and Perrachione, Petersen & Rosser, 2008). This study identified key elements of teacher support systems. The results from this study may be used by school districts to develop quality teacher support systems for their instructional staff.

Teachers are a precious commodity in todays' public schools. Research concerning student achievement has focused on the classroom teacher. The classroom teacher has the greatest impact on student achievement (Darling-Hammond, 2000). School district leaders need to decide how to best support their instructional staff to build teacher efficacy and teacher satisfaction. Teacher retention, shortages, and strikes have a terribly adverse effect of the youth in this Nation. Research has revealed that the teacher shortage in Nebraska is an ongoing concern (Nebraska Department of Education, 2015 and Nebraska Department of Education, 2018). The research and findings from this study suggest that continuing research relating to teacher retention is needed.

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Appendix A

Fellow Superintendents,

I am a doctoral student at Doane University and Superintendent at Maxwell Public Schools working on a doctor of education degree. I am conducting a research study entitled: Teacher Support Systems in Rural Nebraska Schools: Components That Impact Teacher Retention. The purpose of this quantitative study is to determine whether components of teacher support systems impact teacher retention in rural Nebraska School Districts.

Your participation will involve your honest responses to a 36-item survey, which should take approximately 15 minutes to complete. Your participation in this study is voluntary and your honesty is an important component for this study. You may choose not to participate in this study, or to withdraw form this study at any time. The results of this research may be published, however, since all responses will be anonymous, the results will be maintained in confidence. You will not be asked for your name or your school district in the survey.

The research study presents no foreseeable risk to you as potential loss of privacy or breech in confidentiality. Surveys will be maintained online and password protected. The amount of time necessary to complete the survey has been minimized to minimize the impact to your already busy schedule. Although benefit to you may be minimal, the findings of the survey will hopefully benefit all school districts. Results may allow leaders to identify characteristics of teacher support systems, which may positively impact teacher retention.

If you have any questions about this research please contact me through email at todd.rhodes@doane.edu or by phone at 308-520-5645.

Yours in Education,

Todd Rhodes
Superintendent, Maxwell Public Schools
Doctoral Candidate/Researcher
Doane University, Doctorate of Education

Appendix B

Superintendent Questionnaire:

Retention of teachers has become more and more difficult across the nation. Rural schools in Nebraska are not exempt from this difficulty and in some cases find it more difficult to retain qualified teachers.

This questionnaire collects information about rural Nebraska school district's teacher retention statistics as well as selected teacher support models. This data will be used for research purposes to investigate the relationship between teacher retention and teacher support models. Your responses may also be used to guide future planning for your school district.

Please complete the questionnaire. Results will be shared with interested superintendents at the conclusion of this research.

1. What was your 2017-2018 K-12 enrollment? _____

2. How many non-supervisory certificated staff were employed during the 2017-2018 school year? _____

3. How many non-supervisory certificated staff resigned their teaching position due to retirement following the 2017-2018 school year? _____

4. How many non-supervisory certificated staff resigned their teaching position for reasons other than retirement following the 2017-2018 school year? _____

Directions: The following are statements about your school and professional development program(s) for the 2017-2018 school year. Please indicate the extent to which each statement characterizing your school by circling the appropriate response.

N=Never OPY=Once per year OPS=Once per semester OPM=Once per month MOPM=More than once per month

5. As part of our professional learning community: teachers are provided professional development on curriculum development ..... N OPY OPS OPM MOPM

6. As part of our professional learning community: teachers are provided professional development on instruction ..... N OPY OPS OPM MOPM

7. As part of our peer coaching program: teachers are provided feedback on their instructional practice ..... N OPY OPS OPM MOPM

8. As part of our peer coaching program: teachers are provided professional development on lesson design and planning ..... N OPY OPS OPM MOPM

9. As part of our mentoring program: mentors and mentees discuss instructional strategies ..... N OPY OPS OPM MOPM

10. As part of our new teacher induction program: new teachers are reminded of the professional responsibilities of teachers ..... N OPY OPS OPM MOPM

11. As part of our new teacher induction program: New teachers are provided professional development on assessment ..... N OPY OPS OPM MOPM

12. As part of our professional learning community: teachers are provided professional development on assessment.....N OPY OPS OPM MOPM

13. As part of our peer coaching program: teachers reflect on their instructional practice.....N OPY OPS OPM MOPM

14. As part of our peer coaching program: teachers observe one another in classroom settings ..N OPY OPS OPM MOPM

15. As part of our peer coaching program: teachers are provided professional development on instructional strategies .....N OPY OPS OPM MOPM

16. As part of our mentoring program: mentors and mentees discuss the importance of improving the practice of teaching.....N OPY OPS OPM MOPM

17. As part of our new teacher induction program: new teachers are provided professional development on lesson design and planning.....N OPY OPS OPM MOPM

18. As part of our new teacher induction program: new teachers are provided professional development on the implementation of instructional strategies .....N OPY OPS OPM MOPM

Directions: The following are statements about your school and professional development program(s) for the 2017-2018 school year. Please indicate the extent to which you agree or disagree by circling the appropriate response.

SD=Strongly Disagree D=Disagree N=Neither Agree or Disagree A=Agree SA=Strongly Agree

19. My district has a quality professional learning community program .....SD D N A SA

20. My district has a quality peer coaching program.....SD D N A SA

21. My district has a quality teacher mentoring program .....SD D N A SA

22. My district has a quality teacher induction program .....SD D N A SA

23. Our professional learning community has a primary focus of improving student achievement .....SD D N A SA

24. Our professional learning community has developed shared norms and values .....SD D N A SA

25. Our professional learning community includes reflective dialogue .....SD D N A SA

26. Our professional learning community includes support for collaboration .....SD D N A SA

27. An effective component of our peer coaching program is our teacher's ability to reflect on the feedback provided on instructional improvements .....SD D N A SA

28. An effective component of our peer coaching program is our teacher's ability to communicate with each other .....SD D N A SA

29. Mentor and mentee's values and beliefs are significant variables in our mentoring.....SD D N A SA

30. Mentor-mentee relationship is a significant variable in our mentoring program .....SD D N A SA

31. An effective component of our mentoring program is assignment of mentor and mentee roles.....SD D N A SA

32. An effective component of our mentoring program is mentor training through an adopted mentor curriculum .....SD D N A SA

33. An effective component of our mentoring program is formal mentoring training .....SD D N A SA

34. Our new teacher induction program includes explanations of professional responsibilities of teachers ..... SD D N A SA

35. Our new teacher induction program includes support for collaboration ..... SD D N A SA

36. The goals and expectations of our new teacher induction program are clearly communicated to new teachers..... SD D N A SA

Appendix C

Teacher Support System Measurement

Item #	Variable	Components	Item	Code/Score Range
5	Teacher Support-Professional Learning Community	Instructional Strategies	As part of our professional learning community: teachers are provided professional devel. on curriculum development.	1=Never 2=Once per year 3=Once per semester 4=Once per month 5=More than once per month
6	Teacher Support-Professional Learning Community	Instructional Strategies	As part of our professional learning community: teachers are provided professional devel. on instruction.	1=Never 2=Once per year 3=Once per semester 4=Once per month 5=More than once per month
7	Teacher Support-Peer Coaching	Instructional Strategies	As part of our peer coaching program: teachers are provided feedback on their instructional practice.	1=Never 2=Once per year 3=Once per semester 4=Once per month 5=More than once per month
8	Teacher Support-Peer Coaching	Instructional Strategies	As part of our peer coaching program: teachers are provided professional devel. on lesson design and planning.	1=Never 2=Once per year 3=Once per semester 4=Once per month 5=More than once per month
9	Teacher Support-Mentoring	Instructional Strategies	As part of our mentoring program: mentors and mentees discuss instructional strategies.	1=Never 2=Once per year 3=Once per semester 4=Once per month 5=More than once per month
10	Teacher Support-Induction	Professional Responsibility	As part of our new teacher induction program: new teachers are reminded of the prof. responsibilities of teachers.	1=Never 2=Once per year 3=Once per semester 4=Once per month 5=More than once per month

Item #	Variable	Components	Item	Code/Score Range
11	Teacher Support-Induction	Instructional Strategies	As part of our new teacher induction program: new teachers are provided professional devel. on assessment.	1=Never 2=Once per year 3=Once per semester 4=Once per month 5=More than once per month
12	Teacher Support-Professional Learning Community	Instructional Strategies	As part of our professional learning community program: teachers are provided professional devel. on assessment.	1=Never 2=Once per year 3=Once per semester 4=Once per month 5=More than once per month
13	Teacher Support-Peer coaching	Professional Responsibility	As part of our peer coaching program: teachers reflect on their instructional practice.	1=Never 2=Once per year 3=Once per semester 4=Once per month 5=More than once per month
14	Teacher Support-Peer coaching	Instructional Strategies	As part of our peer coaching program: teachers observe one another in classroom settings.	1=Never 2=Once per year 3=Once per semester 4=Once per month 5=More than once per month
15	Teacher Support-Peer coaching	Instructional Strategies	As part of our peer coaching program: teachers are provided professional devel. on instructional strategies.	1=Never 2=Once per year 3=Once per semester 4=Once per month 5=More than once per month
16	Teacher Support-Mentoring	Professional Responsibility	As part of our mentoring program: mentors and mentees discuss the importance of improving the practice of teaching.	1=Never 2=Once per year 3=Once per semester 4=Once per month 5=More than once per month
17	Teacher Support-Induction	Instructional Strategies	As part of our new teacher induction program: new teachers are provided professional development on lesson design and planning.	1=Never 2=Once per year 3=Once per semester 4=Once per month 5=More than once per month

Item #	Variable	Components	Item	Code/Score Range
18	Teacher Support-Induction	Instructional Strategies	As part of our new teacher induction program: new teachers are provided professional devel. on the implementation of instructional strategies.	1=Never 2=Once per year 3=Once per semester 4=Once per month 5=More than once per month
19	Teacher Support-Professional Learning Community	Quality	My district has a quality professional learning community program.	1-Strongly Disagree 2- Disagree 3- Neither Agree or Disagree 4- Agree 5- Strongly Agree
20	Teacher Support-Peer Coaching	Quality	My district has a quality peer coaching program.	1-Strongly Disagree 2- Disagree 3- Neither Agree or Disagree 4- Agree 5- Strongly Agree
21	Teacher Support-Mentoring	Quality	My district has a quality teacher mentoring program.	1-Strongly Disagree 2- Disagree 3- Neither Agree or Disagree 4- Agree 5- Strongly Agree
22	Teacher Support-Induction	Quality	My district has a quality teacher induction program.	1-Strongly Disagree 2- Disagree 3- Neither Agree or Disagree 4- Agree 5- Strongly Agree
23	Teacher Support-Professional Learning Community	Instructional Strategies	Our professional learning community has a primary focus of improving student achievement.	1-Strongly Disagree 2- Disagree 3- Neither Agree or Disagree 4- Agree 5- Strongly Agree
24	Teacher Support-Professional Learning Community	Building Culture	Our professional learning community has developed shared norms and values.	1-Strongly Disagree 2- Disagree 3- Neither Agree or Disagree 4- Agree 5- Strongly Agree
25	Teacher Support-Professional Learning Community	Collaboration	Our professional learning community includes reflective dialogue.	1-Strongly Disagree 2- Disagree 3- Neither Agree or Disagree 4- Agree 5- Strongly Agree

Item #	Variable	Components	Item	Code/Score Range
26	Teacher Support-Professional Learning Community	Collaboration	Our professional learning community includes support for collaboration.	1-Strongly Disagree 2- Disagree 3- Neither Agree or Disagree 4- Agree 5- Strongly Agree
27	Teacher Support-Peer coaching	Collaboration	An effective component of our peer coaching program is our teacher's ability to reflect on the feedback from one another on instructional improvements.	1-Strongly Disagree 2- Disagree 3- Neither Agree or Disagree 4- Agree 5- Strongly Agree
28	Teacher Support-Peer coaching	Collaboration	An effective component of our peer coaching program is our teacher's ability to communicate with each other.	1-Strongly Disagree 2- Disagree 3- Neither Agree or Disagree 4- Agree 5- Strongly Agree
29	Teacher Support-Mentoring	Building Culture	Mentor and mentee's values and beliefs are significant variables in our mentoring program.	1-Strongly Disagree 2- Disagree 3- Neither Agree or Disagree 4- Agree 5- Strongly Agree
30	Teacher Support-Mentoring	Collaboration	Mentor-mentee relationship is a significant variable in our mentoring program.	1-Strongly Disagree 2- Disagree 3- Neither Agree or Disagree 4- Agree 5- Strongly Agree
31	Teacher Support-Mentoring	Mentor Training	An effective component of our mentoring program is assignment of mentor and mentee roles.	1-Strongly Disagree 2- Disagree 3- Neither Agree or Disagree 4- Agree 5- Strongly Agree
32	Teacher Support-Mentoring	Mentor Training	An effective component of our mentoring program is mentor training through an adopted mentor curriculum.	1-Strongly Disagree 2- Disagree 3- Neither Agree or Disagree 4- Agree 5- Strongly Agree

Item #	Variable	Components	Item	Code/Score Range
33	Teacher Support-Mentoring	Mentor Training	An effective component of our mentoring program is formal mentoring training.	1-Strongly Disagree 2- Disagree 3- Neither Agree or Disagree 4- Agree 5- Strongly Agree
34	Teacher Support-Induction	Professional Responsibility	Our new teacher induction program includes explanations of responsibilities of teachers.	1-Strongly Disagree 2- Disagree 3- Neither Agree or Disagree 4- Agree 5- Strongly Agree
35	Teacher Support-Induction	Building Culture	Our new teacher induction program includes support for collaboration.	1-Strongly Disagree 2- Disagree 3- Neither Agree or Disagree 4- Agree 5- Strongly Agree
36	Teacher Support-Induction	Building Culture	The goals and expectations of our new teacher induction program are clearly communicated to new teachers.	1-Strongly Disagree 2- Disagree 3- Neither Agree or Disagree 4- Agree 5- Strongly Agree