Teacher Induction Programs: How Key Components Influence Teacher Retention Rates in Rural School Districts

by

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September 8, 2014

A Dissertation submitted to the Education Faculty of Lindenwood University in partial fulfillment of the requirements for the degree of

Doctor of Education

School of Education

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Dr. Sherry DeVore, Dissertation Chair — Date: 9-8-14

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Declaration of Originality

I do hereby declare and attest to the fact that this is an original study based solely upon my own scholarly work at Lindenwood University and that I have not submitted it for any other college or university course or degree.

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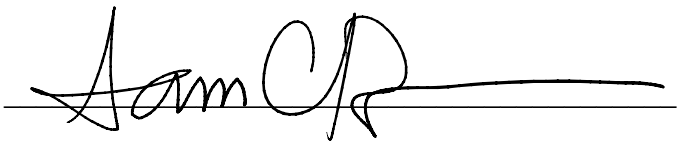
Signature:  Date: 7/11/14

Acknowledgements

I would like to thank my committee members Dr. Sherry DeVore, Dr. Trey Moeller, and Dr. Anthony Rossetti for all of their assistance in successful completion of this work. Thank you all for your time spent editing, providing feedback, and granting guidance as I moved through this challenging process.

I would also like to thank Dr. Kelly Rapp for helping me through the statistical analysis and editing process while focusing my paper on the unique characteristics of rural school districts and teacher induction programs.

A very special thank you to my family: Allison, Benjamin, and Emerson. I am aware of the time I sacrificed to work on writing this dissertation which could have been spent with you. I would also thank my mother and father, Harry and Cindy Rogers, for their support throughout my educational career. Without the support of my family, this would have been a much more difficult endeavor.

Abstract

Upon entrance to the educational arena, new teachers face many challenges, and rural school teachers face a unique series of challenges compared to teachers in urban and suburban school districts (Ingersoll, 2012). Rural school districts often have difficulty both recruiting and retaining teachers (Dadisman, Gravelle, Farmer, & Petrin, 2010). Teacher induction programs presented a possible solution to increase the teacher retention rates for rural school districts (National Commission on Teaching and America's Future, 2007). The purpose of this study was to describe the relationship between the degree of implementation of teacher induction programs and the teacher retention rates for high-performing rural school districts. For the purposes of this study, rural school districts were defined as those with 650 or fewer students enrolled. The sample population was 291 rural school districts in Missouri, and when Missouri Assessment Program (MAP) data and Distinction in Performance recognition filters were applied, the result was a stratified sample of 132 rural school districts. An online survey, created for the purpose of this study, yielded a sample of 46 high-performing rural school district respondents. The analysis of the data revealed no significant relationship between the degree of implementation of a teacher induction program and teacher retention rates for high-performing rural school districts. Specific components of teacher induction programs were not related to teacher retention rates for the sample school districts. Three components of teacher induction programs—rigorous selection of mentor teachers, the requirement of new teachers to observe peer teachers, and the requirement of building administrators to meet at least twice per year with new teachers—were common among sample districts with 100% teacher retention rates.

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Chapter One: Introduction

The path a person travels to become a teacher begins with a college program of study designed to balance theory with experience in the classroom setting (Giles, Davis, & McGlamery, 2009). Upon entrance to the field, new teachers face immediate challenges from a variety of sources. When new teachers are left to sink or swim in isolation, a significant toll is exacted upon the teachers, the students, and the entire school community (Goldrick, Osta, Barlin, & Burn, 2012). When a high quality teacher induction program is not in place to provide needed guidance and support for these new teachers, the negative impact is revealed in decreased teacher retention rates for this critically-important and ever-growing population of new educators in schools (Giles et al., 2009).

The challenges of a teacher new to the profession are not uniform and vary depending on the district, the region, and the building (Fry & Anderson, 2011). Rural teachers are confronted with different challenges when compared to their counterparts in suburban and urban settings (Eppley, 2009). Geographical isolation and small population size define a rural community and create a different landscape than urban and suburban settings (Eppley, 2009). New teachers entering a rural school district from the outside are tasked with both assimilating to the first year as an educator and understanding the dynamics of a rural community (Eppley, 2009).

The first few years of a new teacher's journey are difficult, and new teachers require support and guidance from peers and colleagues to be successful (Ingersoll & Strong, 2011). Physical and social characteristics of rural communities can lead to a sense of isolation from both professional and personal peers during a critical time in a

new educator's career (Eppley, 2009). As a result of the additional challenges experienced by new teachers in a rural school setting, many move toward an early exit from the school district and ultimately, the teaching profession (Eppley, 2009).

Rural school districts have turned to implementation of teacher induction programs as a possible solution to increase teacher retention rates (Kang & Berliner, 2012). When rural school districts consider implementation of a teacher induction program, a balance must be found between implementing an effective induction program and funding the program in accordance with the resources of the district (Broton, Mueller, Schultz, & Gaona, 2009). The variance in teacher induction programs from district to district is, in part, a function of customizing the program to fit the needs of the new teachers and the budget constraints of the district (Wood & Stanulis, 2009). Rural school districts are challenged to determine what components of teacher induction programs represent an effective and affordable option for the district (New Teacher Center, 2008).

Background of the Study

The background factors discussed in this chapter include decreasing teacher retention rates, the importance of quality teacher induction programs as a possible solution for retaining teachers in rural school districts, and how rural school district are impacted by each. Increased teacher turnover rates are a national trend (Ingersoll & Merrill, 2010), especially for new teachers, and rural school districts have historically struggled with both recruitment and retention of teachers due to a variety of factors (Dadisman et al., 2010). Teacher induction programs have evolved from one-to-one mentor programs to comprehensive teacher induction programs over the past several

decades (Wood & Stanulis, 2009). The evolution of teacher induction programs and the national decrease in teacher retention rates affect rural school districts differently than urban and suburban school districts (National Commission on Teaching and America's Future, 2007).

The demographics of the teaching force have changed over the past few decades, and every school district, regardless of urban, suburban, or rural classification, has been impacted (Ingersoll, 2012). In the school year 1987-1988, the typical teacher had 15 years of teaching experience; by 2007-2008, the typical teacher was in his or her first year (Carroll & Foster, 2010). The proportion of teachers with fewer than five years of experience increased from 18% in 2005 to 26% in 2011 (Feistzritzer, 2011). At the other end of the spectrum, teachers with 25 or more years of experience dropped from 27% in 2005 to 17% in 2011 (Feistzritzer, 2011).

Between 1995 and 2005, schools and districts lost 2.7 million teachers due to a steadily increasing attrition rate among beginning teachers and because of normal retirement (Carroll & Foster, 2010). Additionally, Ingersoll (2012) stated:

> Nationwide, in the last decade, new teachers left the profession at an alarming rate of 40% to 50% within the first five years of teaching. The attrition rates of first-year teachers have increased by about one-third in the past two decades. So, not only are there far more beginners in the teaching force, but these beginners are less likely to stay in teaching. In short, both the number and instability of beginning teachers have been increasing in recent years. (p. 49)

The increase in both the number and instability of beginning teachers combined with external pressure and accountability on districts to comply with state and national

standards creates an overwhelming need to retain and train quality educators to lead the students they serve (Ingersoll, 2012).

Districts serving rural communities have a higher percentage of beginning teachers (9.8%) than do midsized cities (8.9%) and suburbs (8.9%) (Gagnon & Mattingly, 2012). Rural school districts experience the weight of the decrease in new teacher retention rates to a greater extent because of the higher concentration of new teachers (Gagnon & Mattingly, 2012). The revolving door of new teachers in a rural school district impacts the continuity of education for students and overall quality of the school district, and the solution must be tailored to the unique teaching environment and available resources (Osterholm, Horn, & Johnson, 2006).

According to research conducted by the National Commission on Teaching and America's Future (NCTAF) (2007), the cost of a teacher in urban school districts (greater than 15,000 students) leaving the education profession is $8,750 per teacher, and the cost of a teacher in non-urban schools (fewer than 15,000 students) is $6,250 per teacher. If extrapolated to the average total number of teachers leaving per year, the cost is $70,000 per year in urban schools and $33,000 per year in non-urban schools (NCTAF, 2007). When the costs are figured as a percentage of the overall budget, rural school districts are more significantly impacted by increased turnover rates than are urban school districts (Reeves, 2003). The high cost of replacing teachers in rural school districts increases the importance of exploring viable options to retain teachers (National Commission on Teaching and America's Future, 2007).

Teacher induction programs have risen to the forefront of the educational arena in response to the changing teacher demographic. Teacher induction programs provide a

much-needed support program for beginning teachers, and over the past decade the number of induction programs has grown considerably (Ingersoll & Strong, 2011). Since 1990, the percentage of beginning teachers participating in induction or mentoring programs has risen from 51% to 91% in 2008 (Ingersoll, 2012). As of the 2010-2011 school year, 27 states required some type of teacher induction program for new teachers (Goldrick et al., 2012). Although the statistics indicate a move in the correct direction, induction programs vary from state to state and district to district.

Implementation of teacher induction programs is a possible solution for rural school districts given the higher number of new teachers combined with the current trend of increasing teacher turnover (Kang & Berliner, 2012). Research has suggested that effective induction programs for beginning teachers can enhance teacher retention (Smith & Ingersoll, 2004). The attrition rates have unfortunately remained consistent over the past few decades, even as teacher induction programs have increased in school districts across the nation (Ingersoll & Strong, 2011). The stability in attrition rates may be the result of induction programs being unavailable to 20% of new teachers (Ingersoll & Strong, 2011) or the consequence of induction programs offered being low in quality or not being adjusted to the unique needs of individual teachers (Ingersoll, 2012). The reality of limited resources and of variables unique to retaining teachers in a rural setting provides extensive additional challenges in these school districts (Eppley, 2009).

Teacher induction programs have evolved in the last three decades and reflect the teacher development knowledge base and the educational reforms of the eras in which they were conceptualized (Wood & Stanulis, 2009). Induction programs can be described as “waves,” referring to the ebb and flow of the programs based on budgetary

cuts and legislative indifference (Wood & Stanulis, 2009, p. 2). Current teacher induction programs are moving toward comprehensive, multi-year induction programs designed to accelerate new teacher development and provide districts with a solution to retaining and growing new teachers in their districts (Goldrick et al., 2012).

The focus of the current study revolved around teacher induction programs and their relationship to teacher retention rates specific to rural school districts. Successful teaching in a rural school district is markedly different than successful teaching in other settings (Eppley, 2009). According to Eppley (2009), if rural teachers do not understand the unique community of which they are a part, the students will not learn. A rural school teacher must understand the generational ties many students have to the community and how this shapes, and often narrows, their concept of their relationship to the larger world (Eppley, 2009). The teacher's responsibility is to facilitate an understanding of both the students' relationship to their world and how they are connected to the world beyond the city and county limits (Eppley, 2009).

Teachers in rural school districts must learn to manage the social aspects of rural teaching (Goodpaster, Adedokun, & Weaver, 2012). One aspect is the unique intersection of life and work in a rural setting which often results in little privacy afforded to teachers (Goodpaster et al., 2012). Rural educators must find ways of fitting into these communities in their efforts to become successful in the classroom (Goodpaster et al., 2012). In addition, teachers who find themselves in a rural district must cope with the lower salary levels which accompany their new positions (Goodpaster et al., 2012. Research has indicated that focusing on community interactions, professional

development, and rural school structures were consistently identified as key factors related to rural teacher retention (Goodpaster et al., 2012).

Rural school districts are faced with multiple challenges to provide high quality educational services for the students they serve. Several of the challenges are similar to school districts across the nation with no regard for demographics or size of student population (Kang & Berliner, 2012). Decreasing teacher retention rates, state and federal standards, and demographic changes in the teacher work force are issues faced by all school districts (Kang & Berliner, 2012). Rural school districts have the additional challenges of geographic isolation, limited resources, and unique community dynamics (Eppley, 2009). Teacher induction programs present a possible solution for rural school districts for many of these challenges if the programs are customized to fit the needs of the teachers and the communities (Kang & Berliner, 2012).

Conceptual Framework

The challenges faced by teachers new to the profession have been a focus of many discussions since the advent of public schools. While elementary and secondary teaching involves intensive interaction with the students in the classroom, the teacher often feels isolated from his or her colleagues (Ingersoll, 2012). The teacher experiences the "sink or swim" scenario, or administrators place the beginners in the most challenging and difficult classroom and they experience "trial by fire" (Ingersoll, 2012, p. 47). Unlike many highly-skilled blue collar or white collar industries, teaching, until recent decades, has not had an induction program for professionals new to the field (Ingersoll, 2012).

In the past decade, teacher induction programs grew under the theory that pre-service training is not sufficient to prepare teachers for the complexity of the position

(Ingersoll, 2012). Recent research indicated induction programs have some positive influence on teacher retention rates (Ingersoll & Strong, 2011). Specifically, an analysis of 15 empirical studies of teacher induction programs indicated an overall positive effect on teachers who experienced some form of induction related to teacher commitment, retention, and job satisfaction (Ingersoll, 2012). The overall number of beginning teachers has ballooned in the past decades; therefore, the number of teachers entering school districts who are eligible for induction programs has followed the trend (Ingersoll, 2012). This is important to consider given the costs associated with comprehensive teacher induction programs for rural school districts.

Considering the cost of staffing, transportation, facilities, and implementing a new teacher induction program, rural school districts are faced with an additional challenge related to the reliance on local property tax revenues for funding (Reeves, 2003). Reeves (2003) noted:

> The small student population in rural school districts does not allow these schools to derive the benefits of economies of scale. All school districts must maintain a certain set of services–facilities, staff, transportation, food services, etc. The costs to provide these are greater for a small school. The smaller the school district, the more it costs per-pupil to provide transportation or staff. For example, it is less cost effective to run a school bus for ten students than for 50 students. As a result, small districts spend a greater proportion of their budget on transportation than do urban districts. The same applies to resource personnel and education specialists. (p. 3)

In a large school, the cost of implementing a teacher induction program is absorbed by thousands of students (Reeves, 2003). In a rural school district, the cost is absorbed by far fewer students and increases the need for these districts to be selective as to which components of an induction program fit their needs and are cost effective (Reeves, 2003).

There is little current research on the relative costs and benefits of teacher induction programs or specific information as to which components of induction programs are the most cost effective (Ingersoll, 2012). A large school district may implement a comprehensive teacher induction program with less consideration as to which components are cost effective (Reeves, 2003). Rural school districts are required to focus on implementation of components which provide the most cost effective solution for their district (Reeves, 2003).

A recent study of state teacher induction programs conducted by the New Teacher Center included common criteria found in successful induction programs (Goldrick et al., 2012). This study was viewed through the lens of current research on teacher induction and mentoring programs, since these components determined the degree of implementation of a teacher induction program for the rural school districts in this study. The criteria listed in the review (Goldrick et al., 2012) provided a basis for this current study:

- the amount of contact time between mentors and new teachers
- the specific selection process required to select a mentor
- the specific requirements of the district's mentor training program
- the creation of a mentor team consisting of different specialists to guide and support the new teacher in multiple areas

- the district provides an induction program beyond the two years required of Missouri public schools
- the district requires a new teacher to observe a peer teacher once per semester
- the requirement of the building administrator to meet with new teachers more than once per year (outside of evaluations)
- the district provides scheduled time for collaboration for new teachers
- the district provides common planning time for new teachers with peer teachers
- the district reduces the class load or modifies teaching assignment of a new teacher for the duration of their induction period.

Statement of the Problem

Due to the financial and structural costs associated with increasing attrition rates (Ingersoll, 2012), there is a need for an effective means of retaining new teachers. There are more beginning teachers in schools today than at any other time in the last 20 years (Giles et al., 2009). Research suggests that high quality teacher induction programs accelerate new teachers' professional growth and make them more effective at a faster rate (Goldrick et al., 2012). Comprehensive, multi-year induction programs reduce the rate of new teacher attrition and provide a positive return on investment (Ingersoll & Strong, 2011).

While all schools benefit from more effective teachers, the benefits of high quality induction programs are of special significance for hard-to-staff rural schools. The turnover rate is typically higher, and the percentage of new teachers at any given time is greater for rural school districts (Gagnon & Mattingly, 2012). Teacher induction

programs can provide a tailored response to the needs of new teachers in the challenging environment present in rural school settings (Gagnon & Mattingly, 2012). Additionally, these programs can transform rural school districts into strong professional communities where new educators want to stay and work (Gagnon & Mattingly, 2012).

The current study contributed to the research base on teacher induction programs by exploring effective practices of high-performing rural school districts. The relationship between teacher induction programs and teacher retention rates in rural school districts contributed to the current body of research by exploration of these programs as solutions to retaining new teachers. Additionally, this study identified patterns within the subgroup of high-performing rural school districts which had 100% teacher retention rates during the cohort years.

Purpose of the Study

The purpose of this study was to describe effective practices of teacher induction programs in high-performing rural school districts. Specifically, degree of implementation and identified components of the programs were explored in relation to teacher retention rates in high-performing rural schools. In doing so, the rural school districts in the study were provided with information to evaluate their current induction programs as a means to retain, grow, and support new teachers. Results of this study yielded possible guidelines for rural school districts to focus existing and future resources to create more efficient teacher induction programs for new teachers.

Research questions. The following research questions guided the study:

1. What is the relationship between the degree in which the teacher induction program is implemented and teacher retention rates in high-performing rural school districts in Missouri?

2. What is the relationship between specific components of a teacher induction program and teacher retention rate in high-performing rural school districts in Missouri?

3. What components of teacher induction programs are used in high-performing rural school districts with 100% teacher retention and describe them.

Null hypotheses. This is designated by the symbol H_o:

$H1_{o:}$ There is no relationship between the degree in which the teacher induction program is implemented and teacher retention rates in high-performing rural school districts in Missouri.

$H2_o$: There is no relationship between specific components of a teacher induction program and teacher retention rate in high-performing rural school districts in Missouri.

Alternate hypotheses. This is designated by the symbol H_a:

$H1_a$: There is a relationship between the degree in which the teacher induction program is implemented and teacher retention rates in high-performing rural school districts in Missouri.

$H2_a$: There is a relationship between specific components of a teacher induction program and teacher retention rate in high-performing rural school districts In Missouri.

Definitions of Key Terms

For the purposes of this study, the following terms were defined:

Cohort. A group of new teachers beginning employment at the same time within a district.

Induction program. A program encompassing everything a district provides to facilitate a new teacher's success as a district employee.

Mentor program. A single component of the broader teacher induction program involving an interaction between a new teacher and a veteran teacher, or multiple teachers, to facilitate success as an educator in the district (Goldrick et al., 2012).

Rural school district. School district with an average daily attendance of fewer than 650 students.

Teacher retention rate. For the purposes of this study, the teacher retention rate reflected the number of new teachers entering the profession in 2009-2010 divided into the number from the same cohort still teaching in the 2012-2013 school year.

Limitations and Assumptions

The following limitations were identified in this study:

Factors beyond the scope of the study. There were limitations to this study due to the multiple variables involved which influence a teacher's decision to leave the profession. The focus of this study was narrowed to the relationship between teacher induction programs and teacher retention. There are several factors—personal and professional, voluntary and involuntary—involved when a teacher decides to leave the profession (Hussar & Bailey, 2011). The teachers identified as leaving the district for the purpose of calculating teacher retention rates in this study were treated as a homogenous group.

Sample demographics. The population of this study included rural school districts in the state of Missouri. For the purposes of this study, a rural school district was defined as a district with an average daily attendance figure of fewer than 650 students.

The population size of rural school districts in Missouri, in accordance with this definition, included 291 districts. The stratified sample used in this study was created by selecting top-performing schools according to two filters: (a) top ten performance on the MAP combined math and language arts scores in any year from 2009-2012 (Missouri School District Rankings, 2014) and (b) achievement of a Distinction in Performance rating for two or more years within the same time span. The stratified sample size was 132 rural school districts.

According to the Central Limit Theorem, when the distribution of the original variable is not normal, a sample size of 30 or more is needed to use a normal distribution to approximate the distribution of the sample means (Bluman, 2009). While a larger sample size will provide a better distribution, the Central Limit Theorem provides a justification of a sample size minimum of 30, which this study exceeded (Bluman, 2009).

Instrument. The survey used in this study was created by the researcher for the specific purposes of the research. The components identified as critical elements of comprehensive teacher induction programs originated from the New Teacher Center's *Review of State Policies on Teacher Induction* (Goldrick et al., 2012) and were modified to fit the needs of the research related to rural school districts. The Missouri State Teachers Association (MSTA) (2005) published work, *Missouri's Mentoring Framework*, was used to establish a minimum requirement for some of the questions based on the guidelines for teacher mentoring programs in Missouri.

The following assumptions were accepted:

1. Teacher induction programs were directly related to, but were not the only reason for, teacher retention.

2. While new teachers benefited from concepts taught through induction programs, induction programs were not able to address all the factors that affect a teacher's decision to leave a school district or to remain in the educational field.

3. The responses of the participants were offered honestly and without bias.

Summary

In response to an increasing teacher turnover rate and changing demographics within the teacher workforce, districts have turned to teacher induction programs as a possible solution for retaining new teachers (Kang & Berliner, 2012). Research indicates an overall positive effect of comprehensive teacher induction programs relating to increasing teacher retention (Ingersoll, 2012). The current study provided a description of the relationship between the degree of implementation of teacher induction programs and teacher retention rates in rural school districts. The scope of this study encompassed high-performing rural school districts in Missouri. Rural school districts present a unique set of challenges to new teachers compared to urban and suburban districts and are often faced with limited resources to invest in implementation of a comprehensive teacher induction program (Eppley, 2009). The intent of this study was to evaluate the teacher induction programs in rural school districts based on the relationship to teacher retention rates.

Additionally, this study described the relationship between each specific component of teacher induction programs and teacher retention rates in rural districts. The relationship between specific components implemented in rural school districts and the teacher retention rates provided guidance for districts. This study determined

components most strongly related to increasing teacher retention for districts facing a similar set of challenges.

In Chapter Two, a review of the literature is presented. Three major themes are discussed. The first theme explored in Chapter Two is teacher recruitment and retention as a national issue. Next, the evolution of teacher induction programs is detailed within the framework of national educational reform and policy decisions. Finally, a description of teacher retention, recruitment, and induction programs is examined as it pertains to rural school districts.

Chapter Two: Review of Literature

The landscape of the teaching profession has changed over the past few decades. One of the most significant changes relates to the increase in teachers entering the profession and the decrease in the number of teachers remaining in the profession (Ingersoll & Merrill, 2010). In an effort to combat teacher turnover rates, districts are implementing comprehensive teacher induction programs (Ingersoll & Merrill, 2010). Teachers require support through induction programs to both increase their effectiveness and the probability they will remain in the educational field (Ingersoll & Merrill, 2010). Rural school districts suffer the same declining rates of teacher retention but have limited resources to apply toward comprehensive induction programs, unlike their urban and suburban counterparts (Osterholm et al., 2006). Based on the review of the literature, this study revolved around the evolution and components of teacher induction programs and how rural school districts present a unique set of challenges in retaining teachers.

A review of the literature indicated three recurring themes. The current reality of education in the United States includes a shortage of qualified teachers coupled with 40%-50% of teachers leaving the profession within the first five years (National Commission on Teaching and America's Future, 2007). Secondly, there has been an evolution of teacher induction programs from informal one-to-one mentoring programs into comprehensive efforts with multiple components implemented to ease the transition into the classroom and provide the support necessary to keep teachers in the district, and ultimately, in the profession (Wood & Stanulis, 2009). A third theme suggested from the literature indicated unique challenges faced by rural school districts to retain teachers and to implement comprehensive teacher induction programs.

Overview

Teaching, as a profession, distinguishes itself from other careers by offering many intrinsic rewards specific to working with students; however, the teaching profession is currently experiencing a confluence of teacher shortages in certain areas and an increasing teacher attrition rate (Ingersoll, 2012). School districts are struggling to recruit highly qualified teachers, and more importantly, are failing to retain them (Lawrason, 2008). Although the teaching profession provided a stable income during the recent unstable economic conditions, many teachers are experiencing the increased accountability and lack of autonomy placed upon them as unequal to the relatively low starting salary level (Ingersoll, 2012). The choice not to teach, or to leave the field, often was driven by simple economics (Lawrason, 2008). Teachers were lured away from the profession toward a job or career in a different field with less demanding requirements for the same, or often higher, salaries (Fry, 2007).

The struggle to retain teachers led to the development of comprehensive teacher induction programs designed to prepare teachers to be effective immediately and to keep them in the profession (Goldrick et al., 2012). The New Teacher Center (Goldrick et al., 2012) reported the latest evidence indicated more beginning teachers entered classrooms in the last five years than any other time in the last 20 years. In 1987-1988, the typical teacher had 15 years of experience; by 2007-2008, the typical teacher was in his or her first year (Carroll & Foster, 2010). The proportion of public school teachers with five or fewer years of experience rose from 18% in 2005 to 26% in 2011 (Feistzritzer, 2011).

High quality induction programs were presented as a critical piece of the solution to combat the increasing teacher turnover and to accommodate the greening of the

teaching profession (Goldrick et al., 2012). In addition to new teachers entering the classroom directly from undergraduate programs, one-third of first-time public school teachers hired since 2005 entered the profession through an alternative certification process other than a college campus-based teacher education program (Feistzritzer, 2011). The New Teacher Center's *Review of State Policies on Teacher Induction* (Goldrick et al., 2012) is a comprehensive summary of induction policies in each of the 50 states, and this report summarizes existing policies through 10 key criteria deemed most critical to high quality induction programs.

Teacher attrition rates remain an issue for most school districts (Cochran & Reese, 2007). The problem has many facets and is not limited to an urban or a rural area (Cochran & Reese, 2007). The major concern in recent years was a teacher shortage crisis until the data consistently showed an ample number of qualified teachers were present to fill the classrooms (Cowan, 2010). The newest data reveal the crisis is not a shortage of teachers available to teach, but rather the large number of teachers who are leaving the profession (Ingersoll, 2012).

Rural school districts face many of the same challenges experienced at the national level, with the vast majority of the reasons teachers left considered personal and effectively beyond the control of any district (Cowan, 2010). Factors specific to rural school districts are discussed later in this chapter. For instance, personal factors such as family, finance, and the future were similar to the national scene, but the specific reasons appeared to be unique to rural school districts (Cowan, 2010).

Teacher Retention and Recruitment: Nationwide Issue

School districts across the United States struggle to hire teachers for increased vacancies (Kang & Berliner, 2012). Several factors have caused the vacancies, such as teacher retirements, growing enrollment, and efforts to reduce class sizes, creating an influx of openings in school districts around the nation (Lawrason, 2008). Additional need was increased due to the No Child Left Behind Act (NCLB), a federal requirement which required school districts to place a highly qualified teacher in every classroom (Lawrason, 2008).

A new normal has emerged as districts struggle to meet the criteria for highly qualified teachers, which includes the following "three essential criteria: (1) attaining a bachelor's degree or higher in the subject taught; (2) obtaining full state teacher certification; and (3) demonstrating knowledge in the subjects taught" (U.S. Department of Education, 2006, para. 2). These requirements have affected school districts disproportionately with the greatest impact felt by urban and rural districts (Eppley, 2009). Rural school districts have been specifically impacted by this requirement and often are faced with placing a teacher who is not deemed highly qualified in a classroom and risking possible accreditation penalties as a result (Eppley, 2009).

The total number of students enrolled in public elementary and secondary schools increased by 10% between 1995 and 2008 and is projected to increase an additional 7% between 2008 and 2020 (Hussar & Bailey, 2011). Increased enrollment requires school districts to hire additional teachers, and more importantly, to retain highly capable teachers to meet this demand (Hussar & Bailey, 2011). Recruiting new teachers to accommodate the growing number of students is necessary for school districts, but the

data indicate recruitment is not the most significant challenge (Ingersoll, 2012). There are an ample amount of individuals certified to fill the needed positions across the nation, but the issue is retention of newly-recruited educators once they enter the profession (Ingersoll, 2012).

Inevitable in any discussion related to teacher retention is the issue of salary (Morrissey, 2012). Even in the midst of recent economic downturns, teacher salary levels have not been commensurate with the initial and long-term salary levels of individuals with the same education in the business world or private sector (Morrissey, 2012). Most teachers have stated they did not enter into the teaching profession because of the salary; however, it has exacted a toll on new teachers as the levels of accountability and demands continue to increase (Lawrason, 2008). The soft skillset possessed by many new teachers, which translates into success as a classroom teacher, are also in high demand in other professions, which offer far less demanding and similar, or higher, salary levels (Morrissey, 2012). As a result, the issue of compressed salary levels for teachers compared to other occupations requiring similar degrees and soft skillsets impact the teaching profession in both the recruitment and retention of new teachers (Ingersoll & Merrill, 2010).

While approximately half of all new teachers leave the profession within five years, this attrition rate is 50% higher in rural and urban school districts when compared to suburban counterparts (Gagnon & Mattingly, 2012). In addition to the focus on staffing schools with highly qualified teachers, districts are required to maintain academic standards in order to remain accredited (Ingersoll, 2012). Districts are required to provide new teachers with the professional development needed to be immediately

effective (Ingersoll, 2012). A support system for new teachers must be in place from the start of employment through the first two or three years as a teacher (Ingersoll & Strong, 2011).

The same urban and rural school districts encumbered by high teacher turnover rates also struggle with teacher recruitment (National Education Association [NEA], n.d.). Recruitment and retention of highly qualified teachers are issues faced by most, if not all, school districts in the nation; however, the impact is greater for urban and rural school districts (Gagnon & Mattingly, 2012). As a result of teacher retention and recruitment representing two sides of the same coin, the effort to improve retention and recruitment has led to the development of aggressive recruitment campaigns and comprehensive teacher induction programs (NEA, n.d.).

The NEA (n.d.) has provided school districts with a comprehensive list of specific recruitment goals and strategies. The strategies range from the introduction of a career pathway program for seniors in high school to the development of a Masters in Teaching and Learning in Urban and Rural Settings graduate program (NEA, n.d.). Developing a comprehensive recruitment plan, creating a strong marketing and outreach campaign, revamping the hiring process, providing nontraditional routes into the profession, and focusing on "growing your own" teachers within the communities are outlined in the online toolkit authored by the NEA (n.d.).

Recruiting high quality teachers into schools is a necessary first step in the process but is only one piece of the existing puzzle. Hussar and Bailey (2011), through the National Center for Education Statistics, conducted a teacher attrition and mobility survey in 2007 and 2008. Of the 3,380,300 full-time and part-time public school teachers

who were teaching in the 2007-2008 school year, 84.5% remained at the same school ("stayers"), 7.6% moved to a different school ("movers"), and 8.0% left the profession ("leavers") during the following year (Hussar & Bailey, 2011, p. 94). Additionally, 26.2% of the public school "movers" changed schools due to personal life factors, while only 5.3% of teachers left as a result of the non-renewal of their teaching contracts (Hussar & Bailey, 2011, p. 94).

Education is moving forward into a future widely unknown (NEA, n.d.). The profession is challenged with recruiting competent teachers to replace veteran teachers and providing continual professional development to meet the ever-changing needs of students, parents, and communities (NEA, n.d.). According to the NEA (n.d.):

> Over the next decade, schools in the United States will need to hire many new teachers and these factors will affect the recruitment of these teachers, shrinking teaching force, growing student population, lack of diversity among teachers to match the diversity of students, and the need for teachers in specific types of schools, geographic locations, and subject areas. (para. 2)

It is especially troubling when the rate of new teachers leaving the classroom within the first three years was 30% and increased to 45% by year five (National Commission on Teaching and America's Future, 2007).

There are many reasons why new teachers leave the profession, including difficult work assignments, unclear expectations, inadequate resources, role conflict, reality shock, discipline issues, and lack of support (Kopkowski, 2008). Cochran and Reese (2007) discovered, "Teacher attrition is most severe among teachers who have been in the classroom for only four or five years" (p. 25). The onslaught of challenges confronted by

a new teacher can lead to a feeling of isolation within a school building (Ingersoll & Merrill, 2010). Fisher (2000) stated, "The worst thing is they [new teachers] adopt survival strategies, as opposed to effective teaching strategies, that stay with them for 30 years" (p. 1). The result is the snowball effect created when a new teacher does not obtain the skills required to manage a classroom of students, and this leads to discipline management problems, which happens to be one of the primary reasons why new teachers leave the profession (Ingersoll & Merrill, 2010).

According to the National Commission on Teaching and America's Future (NCTAF) data in 2007, half of the teaching workforce was at or near retirement. The number of teachers over age 50 increased from 530,000 in 1988 to 1.3 million in 2008, and the most common age for teacher retirement was 59 (Carroll & Foster, 2010, p. 7). The response to the steadily increasing number of teacher retirements across the United States is an increase in recruiting efforts to replace the departing teachers (Carroll & Foster, 2010). The push to recruit new teachers into schools has yielded a beginning teacher attrition rate increase of nearly 40% during the last 16 years (Ingersoll & Merrill, 2010). Teacher recruitment has not provided a viable solution to staffing challenges, especially in rural and urban school districts impacted most by increased teacher turnover (Ingersoll & Merrill, 2010).

The modal experience level for the typical teacher in 1987-1988 was 15 years, and there existed a significant pool of teachers with well over 10 years of experience (Ingersoll & Merrill, 2010). By 2007-2008, the mode was one to two years; 25% had five or fewer years of experience, and 50% had 11 or fewer years of experience (Ingersoll & Merrill, 2010). When veteran teachers leave education, the district loses several years

of professional development, experienced mentors, and coaches desperately needed for new teachers entering the district (Ingersoll & Merrill, 2010).

New teachers bring fresh perspectives that are essential to improving teacher effectiveness, but experience is crucial in student achievement (Ingersoll & Merrill, 2010). Research has demonstrated that with each year of experience, a teacher improves in both proficiency and effectiveness during the first seven years of teaching (Huang & Moon, 2009). Additional years of experience at the same grade level adds to the direct, positive impact on student achievement for up to 20 years of teaching experience (Huang & Moon, 2009). Teacher retention is critical to the level of student achievement and underscores the importance of support for new teachers as they enter the profession (Huang & Moon, 2009).

Retention is crucial in order to maintain high standards in K-12 instruction (Lesnieski, 2009). High teacher turnover results in several negative consequences. It is suggested turnover rate decreases student achievement; imposes a high cost on districts that must recruit, hire, and train replacement teachers; and disrupts school culture and the continuity of the overall school experience (Glazerman, Senesky, Seftor, & Johnson, 2006). Although the research is minimal, findings indicate mentor-based support for new teachers has a direct positive impact on student achievement, thus supporting the need for both recruitment and retention of highly qualified teachers in the classroom (Fletcher, Strong, & Villar, 2008).

School districts impacted most severely by high teacher turnover are urban and rural school districts (Gagnon & Mattingly, 2012). Rural schools, which often have the greatest need for highly experienced teachers, are faced with the inability to attract

veteran teachers and are staffed with new, inexperienced teachers (Gagnon & Mattingly, 2012). This is compounded by the flight of teachers from their districts in search of better jobs when they have gained experience or could not adjust to the unique characteristics presented by the teaching assignment (Gagnon & Mattingly, 2012). As rural school districts face the challenge of teacher recruitment and teacher retention, teacher induction programs have emerged as a solution focused on providing support for new teachers in an effort to retain quality teachers (Kang & Berliner, 2012; Kopkowski, 2008). In theory, investment of more time and resources in teacher retention should reduce the time, energy, and resources invested in recruiting teachers and should improve student achievement (Ingersoll & Strong, 2011).

Although the research is scarce, the basic assumption has been that high rates of teacher turnover are harmful to student learning (Ronfeldt, Loeb, & Wyckoff, 2013). Described as a loss in institutional memory, it stands to reason that student learning is adversely impacted when a district loses teachers at a high rate (Ronfeldt et al., 2013). The other side of the discussion is the benefit, in some cases, of institutional turnover resulting in a better person-job match and an infusion of new ideas into the organization (Ronfeldt et al., 2013). Research has shown poor person-job matches predict migration, and that teachers tend to be more productive in their new schools (Jackson, 2010). The institutional benefits of teacher turnover are realized by a school district, in most cases, if it is the less-effective teacher who leaves the district (Ronfeldt et al., 2013).

Statistically, low achieving schools have a higher rate of poverty and minority students (Gagnon & Mattingly, 2012). The two variables factored into the teacher retention equation make it difficult to determine whether the exodus of teachers from a

district causes low student achievement, or if the low student achievement and the additional characteristics typical of low-performing districts result in teachers leaving the district (Ronfeldt et al., 2013). Rural communities, on average, have smaller poverty and minority compositions than their urban counterparts, but they share the same average percentage of new teachers due to teacher turnover (Gagnon & Mattingly, 2012). Administrators in rural school districts are faced with the additional burden of geographical isolation and financial limitations which magnify the impact of this shared statistic (Eppley, 2009).

The research of increased teacher turnover rates underscores the consequences for schools and students. Significant financial costs of filling positions, disruption of continuity, the inability to form a cohesive school environment, and the influx of inexperienced and less effective new teachers affect school districts with high turnover rates (Harrington & Grissom, 2010). Rural school districts are limited in the available responses to the consequences of high teacher turnover (Osterholm et al., 2006). Comprehensive teacher induction programs provide a possible solution for increased teacher retention for all schools faced with high teacher turnover rates (Ingersoll, 2012). The emphasis on teacher recruitment shifts to teacher retention (Ingersoll, 2012). Rural school districts respond with teacher induction programs as a manageable method of increasing teacher retention (Cowan, 2010).

Missouri has maintained an average teacher turnover rate of 16.0%, which is close to the national average of 16.8% (Harrington & Grissom, 2010). The turnover rates in Missouri, for urban and rural school districts, are close to the national average (Harrington & Grissom, 2010). St. Louis and Kansas City public school districts

averaged 38% and 26% in 2007, respectively (Harrington & Grissom, 2010). Some rural school districts have registered turnover rates at similar rates well above the national average of 16% (Harrington & Grissom, 2010).

Teacher turnover of public school teachers has been estimated to cost districts nearly $7.3 billion each year in the United States (NCTAF, 2007). The increase in the teacher workforce and the rate of teacher turnover account for the increased cost compared to a similar report in 2005 (NCTAF, 2007). According to a 2007 report by the NCTAF, teacher attrition rates grew by 50% over the previous 15 years, the national teacher turnover rate rose to 16.8%, and the national average for urban districts increased to over 20%. The issue cannot be addressed without an emphasis focused in retaining teachers in the profession; therefore, comprehensive teacher induction programs would help ensure teachers remain in the district until they grow into effective educators (NCTAF, 2007).

The research has emphasized common realities faced by the nation in regards to teacher retention and recruitment. First, the issue is more about teacher retention than teacher recruitment (Gagnon & Mattingly, 2012; Ingersoll, 2012). Second, the costs associated with high teacher turnover rates impact students both directly and indirectly (Harrington & Grissom, 2010; Ronfeldt et al., 2013). Third, and most pertinent to the focus of this study, all roads lead to comprehensive teacher induction programs as an important piece of the solution to provide support necessary to grow and retain high quality teachers (Goldrick et al., 2012; Ingersoll & Strong, 2011).

Teacher Induction Programs: Evolution

Education has moved through several transformations during the course of the last 50 years (Hargreaves & Shirley, 2009). The changes have occurred due to a variety of economic, social, and political shifts (Wood & Stanulis, 2009). Each shift in the educational world is described in the book *The Fourth Way: The Inspiring Future for Educational Change* as a "way of educational change" (Hargreaves & Shirley, 2009, p. 2). Wood and Stanulis (2009) specifically detailed the evolution of teacher induction programs and described the era in which induction programs were conceptualized. When the two perspectives are viewed together, a clear picture of the current state of comprehensive teacher induction programs is formed.

The First Way of educational change lasted from the end of WWII until mid-1970 (Hargreaves & Shirley, 2009). Bottom-up governmental support for education was the trend as governments invested heavily in education and left the professionals to determine how to move education without any interruption or intervention (Hargreaves & Shirley, 2009). Furthermore:

> The First Way of state support and professional freedom led to innovation and new social movements, but also uneven school performance, inconsistent leadership, and educational improvements informed by intuition and ideology rather than evidence. (Hargreaves & Shirley, 2009, p. xi)

Teachers during this time were given the freedom to choose their own curriculum with little regulation (Wood & Stanulis, 2009). Teacher induction programs were loosely organized and varied from district to district (Wood & Stanulis, 2009). The stress of following a mandated curriculum or ensuring students achieved a certain level on a

standardized test was absent from the equation (Hargreaves & Shirley, 2009). Teachers shut their doors and taught without interruption or intervention (Hargreaves & Shirley, 2009).

The Second Way lasted from the 1970s to the late 1980s and involved governmental control tightening and more regulation of education (Hargreaves & Shirley, 2009). It also brought an era of competition among several parties attempting to gain an advantage for their children (Hargreaves & Shirley, 2009). School rankings were published and top-down governmental control, combined with free market competition, created a lack of quality teaching and leadership (Hargreaves & Shirley, 2009). The authors described the Second Way as "the competition and educational prescriptions, in which innovation gave way to standardization, uniformity, and inequity and led to great costs in teacher motivation, leadership capacity, and student learning" (Hargreaves & Shirley, 2009, p. 12). Teachers entered the profession knowing their test scores were published, and although there was no clear and consistent curriculum in place, they were held responsible for the performance of their students (Hargreaves & Shirley, 2009).

The Third Way continued with the government being responsible for setting the goals and targets with increased intensity (Hargreaves & Shirley, 2009). This period was defined by more top-down pressure and more bottom-up support (Hargreaves & Shirley, 2009). Teacher training and professional development were provided and required for teachers both currently in the profession and those new to education (Hargreaves & Shirley, 2009). The Third Way, while seemingly a common ground between the First and Second Ways, lost its bearings mainly as a result of the following distractions:

> The path of autocracy. Although the Third Way emphasized professionalism, governments, however got more autocratic, more centered on accountability, and became increasingly more intrusive. Educational goals were more tightly focused on literacy and numeracy, leading to schools and teachers becoming less creative and innovative with the curriculum.
>
> The path of technocracy. There is an obsession with data in the education system. Policy makers believed that if they have more data in real time about more people, they would be able to know what every teacher was doing in every school right at that moment. It was believed that all achievement gaps could be detected from data, and too often, schools and school systems misused and misinterpreted data and research evidence.
>
> The path of effervescence. Professional learning communities were often mandated on teachers. They were supposed to be places where teachers could engage in lively discussions about teaching and learning. Instead they became meetings about numbers, test results and quick fixes rather than long term engagements with transformation around deeper goals about teaching and learning. (Hargreaves & Shirley, 2009, p. 23)

Since the late 1970s, teacher induction programs have mirrored the teacher development knowledge of the era (Wood & Stanulis, 2009). Researchers Fideler and Haselkorn (1999) identified state induction programs as developing in waves of legislation and implementation. Each wave represented a shift in induction programs due to budgetary cuts and legislative policy (Fideler & Haselkorn, 1999). The four waves of induction development included the following:

- First wave programs implemented prior to 1986,
- Second wave programs implemented between 1986 and 1989,
- Third wave programs implemented between 1990 and 1996,
- Fourth wave programs implemented between 1997 and 2006. (Fideler & Haselkorn, 1999)

As the educational understanding of teacher development increased, the quality of teacher induction programs progressed (Wood & Stanulis, 2009). Informal one-to-one mentoring evolved into comprehensive teacher induction programs more common in the current educational climate (Wood & Stanulis, 2009). Mentoring programs developed as a critical component of induction packages which included professional development designed to provide multiple areas of support for new teachers (Wood & Stanulis, 2009).

These perspectives serve to describe the progression of educational change and teacher induction programs throughout the past several decades. Teacher induction programs during each wave, discussed by Wood and Stanulis (2009), reflected the different periods of educational change detailed by Hargreaves and Shirley (2009). When viewed together, it becomes obvious why teacher induction programs have evolved based on the direction of each period of educational change.

In 1978, eight states developed state teacher induction programs focusing on the needs of new teachers and their well-being upon arrival in the district (Wood & Stanulis, 2009). The first induction programs were loosely organized, informal, and unfunded initiatives aimed to reduce teacher attrition rates (Wood & Stanulis, 2009). Districts were not accountable for implementation and assessment of the initial induction programs, and

the programs soon relented to the second wave of induction programs (Wood & Stanulis, 2009).

The “First Way of educational change" described by Hargreaves and Shirley (2009, p. 10) addressed the bottom-up governmental support for education. During this period of educational change, government invested heavily in education and placed trust in local and state entities and professionals to make educational decisions (Hargreaves & Shirley, 2009). Teacher induction programs were created as needed by individual districts, or at the building level, and varied tremendously across the nation (Wood & Stanulis, 2009). The effectiveness of teacher induction programs could not be determined during this time period due to the wide variations of the programs in place (Wood & Stanulis, 2009).

Second-wave induction programs focused on mentoring programs, were developed independently, and resulted in great variance in each of the 30 states which claimed to have created induction programs (Wood & Stanulis, 2009). During this period, mentoring and induction were used as interchangeable terms (Wood & Stanulis, 2009). This led to an increased organizational structure which incorporated observations and professional development (Fideler & Haselkorn, 1999).

Between 1990 and 1996, induction programs increased in developmental and structured approaches and added formative assessment components to the programs (Fideler & Haselkorn, 1999). Seventy-five percent of third wave state-initiated programs included formative assessment components, 100% included a mentoring component, and 50% offered professional development activities (Fideler & Haselkorn, 1999). The first series of research articles emerged citing positive effects of mentoring on novice teachers

(Wood, 2001). Counter to the new-found evidence confirming the success of mentoring programs in accomplishing the intended goal of reducing teacher turnover, many programs were eliminated due to funding reductions (Wood, 2001).

The second and third waves of teacher induction programs were created during the Second Way of educational change described by Hargreaves and Shirley (2009). The Second Way of educational change brought top-down governmental pressure with an increase in standardized testing, financial incentives, and competition through the free market system (Hargreaves & Shirley, 2009). The increase in competition and publicized test results led many districts to create more comprehensive induction programs as a method to retain quality teachers for the purpose of raising test scores (Hargreaves & Shirley, 2009). Mentor teachers typically consisted of those with high standardized test scores who were given the responsibility of training new teachers to attain the same high level of test results (Wood & Stanulis, 2009). Driven by competition, induction programs were required to evolve into more organized systems due to the increased accountability placed on school districts by the new top-down governmental pressure to increase standardized test scores (Hargreaves & Shirley, 2009).

The fourth-wave induction program era resulted in comprehensive systems organized using multiple strategies to provide instructional support for novice teachers (Ingersoll, 2012). Mentoring and induction were separated with the understanding that mentoring was an important component of teacher induction (Wood & Stanulis, 2009). Comprehensive induction program included several components aside from mentoring, in order to serve the learning needs of teachers during the critical first years in education (Giles et al., 2009).

As Hargreaves and Shirley (2009) described in detail, education reached a new era, which demonstrated a need for radical changes to address the current issues in education. Teacher induction programs evolved from loosely-organized and underfunded initiatives to comprehensive programs beyond mentoring, which focused on developing new teachers and created true collaborative environments (Hargreaves & Shirley, 2009; Wood & Stanulis, 2009). The principles at the heart of the Fourth Way of educational change include high quality teachers, positive and powerful professional associations, and lively learning communities (Hargreaves & Shirley, 2009). Teacher retention achieved through creation of positive and powerful professional associations and lively learning communities creates a fertile bed for increased focus on comprehensive teacher induction programs at the national, state, and local levels (Goldrick et al., 2012; Hargreaves & Shirley, 2009).

Wood and Stanulis (2009) defined quality teacher induction as "a multi-faceted process of teacher development and novice teachers' continued learning-to-teach through an organized professional development program of educative mentor support and formative assessment" (p. 3). This process includes a multi-year approach to structured induction programs with activities to support novice teachers in a developmentally-appropriate manner through the first three years (Wood & Stanulis, 2009). Through recent research conducted by the New Teacher Center, a need was identified for teacher induction programs to "address teacher working conditions—including the critical role of school leadership, opportunities for teacher leadership, collaboration, and customized professional development" (Goldrick et al., 2012, p. 6). Rural school districts must

customize the teacher induction program to the specific needs related to the unique characteristics present in the district and community (Eppley, 2009).

The "sink or swim" approach to new teacher induction damages new teachers beginning a career in education (Ingersoll, 2012, p. 2). The students pay a significant price when turnover rates soar in rural school districts, as do the communities where they reside (Gagnon & Mattingly, 2012). The isolation felt by new teachers in rural school districts compounds when paired with the normal influx of stressors faced by all teachers new to the profession (Gagnon & Mattingly, 2012; Goldrick et al., 2012). The learning curve is high during the initial entrance to the teaching profession, and new teachers are less effective in the first years as educators (Goldrick et al., 2012). Rural school districts with high turnover rates are impacted by the inability to retain new teachers, either during the learning curve, or possibly worse, after the teacher has reached a level of effectiveness (Osterholm et al., 2006).

Ellen Moir (2009), chief executive officer of the New Teacher Center, stated, "When districts and schools organize to accelerate new teacher development, they break the cycle of inequity and provide children who are in most need of a quality education with teachers capable of helping them" (p. 15). Over the past 20 years, the data have indicated the impact of induction programs extends beyond the new teacher and the mentor and into the creation of schools where induction is imbedded in the culture (Moir, 2009). Several lessons have emerged from the analysis of the evaluative data compiled from the last 20 years:

1. A new teacher induction program requires a system-wide commitment to teacher development.

2. Induction programs accelerate new teacher effectiveness.
3. Standards-based formative assessment tools document impact.
4. Induction programs build a pathway for leaders.
5. Good principals create a culture of learning.
6. Effective induction programs combine high quality mentoring with communities of practice.
7. Teaching conditions matter to supporting and keeping new teachers.
8. Online communities provide timely, cost-effective mentoring.
9. Policy complements practice.
10. Good induction programs are accountable, not just compliant. (Moir, 2009, pp. 15-19)

Schools focused on these components create a comprehensive teacher induction program, which cultivates leadership and encourages collaboration within the learning environment (Moir, 2009).

Prior to the creation of a teacher induction program, it is vital to assess district demographics, capabilities, and learning strategies (Moir, 2009). The program must be aligned with focused teacher learning initiatives currently in place (Moir, 2009). Induction programs achieve the greatest success when all current initiatives are aligned, including English Language Learner programs, special education, and teacher learning initiatives (Moir, 2009).

The core of this model revolves around one-on-one mentoring programs, which match exemplary teachers with new teachers (Moir, 2009). The mentors analyze the new teacher's practices using classroom data and offer constructive criticism and solutions for

improvement (Moir, 2009). Research consistently shows an increase in student achievement when effective mentoring is implemented as a component of an induction program (Fletcher & Strong, 2009). Effective mentoring has become the cornerstone of induction programs created in the last decade, and benefits anchor the effort to increase teacher retention in school districts nationwide (Moir, 2009).

Successful induction programs are created within districts where strong educational leaders create a culture of learning and a community of learners (Ingersoll, 2012; Moir, 2009). When the culture of a district embraces high quality mentoring programs for new teachers and school leaders foster and support all teachers in an effort to retain, challenge, and learn from both new and veteran teachers, the district embeds induction within the culture (Moir, 2009). This change in culture begins with the educational leaders at the district and building level and creates schools capable of transformational change for all stakeholders (Moir, 2009).

The evolution of teacher induction programs reached the current level of emphasis with the release of the New Teacher Center policy paper, *Review of State Policies on Teacher Induction*, in February 2012 (Goldrick et al., 2012). Goldrick et al. (2012) stated, "We must transform the way we bring our newest educators into our schools" (p. iii). In addition to local considerations, school districts have adhered to the state education requirements which influence both the design and scope of induction and mentoring programs (Goldrick et al., 2012). While induction programs vary from state to state and district to district, there are several common components discovered through a review of current state policies. The common characteristics include the following:

- Length of teacher induction program is two or more years in length.

- Rigorous selection process for mentor teachers.
- Mentor training program with ongoing professional development.
- Minimum amount of contact time for mentor and mentee.
- Mentor teachers–classroom management specialist, curriculum specialist, lesson planning, assessment (a **different** specialist in each area working on specific area with the new teacher).
- Minimum amount of classroom observation time.
- Minimum amount of time required to meet with principal.
- Collaboration with peer teachers.
- Reduction of new teacher class load or modification of teaching assignment for duration of teaching period. (Goldrick et al., 2012)

The policy paper contained a compilation of state induction policy reviews of all 50 states in an effort to provide a framework to change current policy to meet the needs of new teachers for the benefit of the students they serve (Goldrick et al., 2012).

The Missouri State Teachers' Association (MSTA), in 2005, released a report which listed guidelines for mentor selection. The criteria outlined in both the MSTA report and the New Teacher Center's policy papers were considered in the creation of the survey sent to high-performing rural Missouri school districts.

Missouri passed legislation in 2003 which required beginning teachers to participate in a two-year mentoring program as part of the district's induction program (MSTA, 2005). The implementation of a multi-year induction program for all first- and second-year teachers arose from research which suggested benefits accrue to teachers and students only after multiple years of professional support (Glazerman et al., 2010; Strong

& Villar, 2007). Missouri was one of five states which required a minimum of two years for teacher induction programs for beginning teachers; six states required more than two years, typically three, for new teacher induction programs (Goldrick et al., 2012). Mentor selection guidelines in both reports indicated a need for a rigorous process focused on length of time in the district, the mentor located in the same building as the new teachers, and a mentor who has demonstrated exemplary command of the content area to which the new teacher is assigned (Goldrick et al., 2012; MSTA, 2005).

Professional development designed to train mentors in various areas of teaching and learning were indicators of successful teacher induction programs in both reports (Goldrick et al., 2012; MSTA, 2005). The state policies, which specifically detailed training criteria, listed the following as critical to successful mentor development:

- Knowledge of state standards and/or common core standards
- Knowledge of formative assessment of new teacher performance
- Knowledge of classroom observation
- Knowledge of reflective conversations and/or cognitive coaching
- Knowledge of adult learning theories. (MSTA, 2005, p. 4)

Missouri guidelines suggested a document which outlined the mentors' responsibilities and an informal evaluation and review of the mentor (MSTA, 2005). Ongoing mentor training was cited in both reports as critical to the success of teacher induction programs, and the suggested guidelines pointed to an ongoing and formal process as the exemplar model (Goldrick et al., 2012; MSTA, 2005). The New Teacher Center (NTC) national induction model suggested a professional development model which provided the following:

- Twelve full days of professional development for mentors in both the first and second years on mentor assignment.
- Nine full days in year three of mentor assignment.
- Half-day every week or half-day every other week in each year. (Goldrick et al., 2012, p. 6)

The intensive mentor training suggested by the NTC emphasized the importance of ongoing and formal mentor professional development for successful induction of new teachers (Goldrick et al., 2012).

The amount of contact between a mentor and the assigned new teacher is of critical importance to the development of an induction program for a district (Fletcher & Strong, 2009; Glazerman et al., 2010; Goldrick et al., 2012). The suggested model by the NTC revolved around full-time mentors, who would be released from all classroom teaching duties to focus on support and feedback for new teachers (Goldrick et al., 2012). The MSTA guidelines for mentor teachers did not suggest a minimum amount of contact time for mentors and mentees (MSTA, 2005). Research has indicated one of the most important elements of successful mentoring programs is the frequency and duration of contact time between mentor and mentee (Strong & Villar, 2007). The NTC recommended 1.25 to 2.5 hours per week of required and protected time for interaction between mentor and mentee (Goldrick et al., 2012). For the purposes of this study, a survey question was created to determine if a district required additional contact time beyond the NTC recommendation.

Peer observations, collaboration with colleagues, and contact time with administrators are factors included in the research as integral components of successful

induction programs (Glazerman et al., 2010; Ingersoll, 2012). The survey data from this current study related to each of the factors. The data revolved around the frequency at which a new teacher was presented with the opportunity to observe, collaborate, and meet formally with master teachers and administrators.

Rural school districts present a unique set of considerations due to the characteristics of demographics and financial realities. The survey was developed and questions were posed to extract information about teacher induction programs. The financial realities present in rural school districts also guided the survey questions used for this study.

While schools benefit from the creation of teacher induction programs which incorporate the common characteristics of successful induction programs, the specific benefits realized by urban and rural school districts became the foundation of this study. The common characteristics of teacher induction programs, provided by the New Teacher Center's policy paper, served as a pathway for comparison of high-performing rural school districts in Missouri (Goldrick et al., 2012). Rural school districts, historically, face both a recruitment and retention challenge due to a variety of factors (Gagnon & Mattingly, 2012). The use of research-based common characteristics of induction programs provided a baseline for comparison of rural Missouri school districts detailed in later chapters.

Teacher Retention, Recruitment, and Induction Programs: Rural School Districts

Ingersoll (2012) argued there was not a real teacher shortage and began to shift the focus from teacher recruitment to teacher retention as the solution for struggling school districts. Shortages have been identified in certain geographic areas and subjects,

as shown by the literature, especially in rural areas serving low income or high minority students (Hammer, Hughes, McClure, Reeves, & Salgado, 2005). Although highly effective teachers have shown significant impact on student achievement (Chetty, Friedman, & Rockoff, 2011), rural school principals are often faced with the reality of hiring whoever is available rather than the best candidate for the position (Maranto & Shuls, 2012). The inability of rural principals and superintendents to attract and retain highly qualified teachers often results in the entrance of a less experienced teacher or the elimination of programs offered to students (Maranto & Shuls, 2012).

Some rural school districts are economically stable communities; however, many have struggled with stressful developments (McCullough & Johnson, 2007). Many rural communities have lost population and have been on the edge of economic crisis (McCullough & Johnson, 2007). When rural communities lose their community schools to consolidation, this leads to a significant blow to the sense of community where the local school systems often represent anchor points for the identities of the towns (McCullough & Johnson, 2007).

Students in rural school districts are often afforded neither the resources nor the quality teachers needed to overcome the unique challenges they face and to find academic and personal success (McCullough & Johnson, 2007). According to a study of 30 low-poverty districts in North Carolina, on average a student attending one of the studied schools was:

- twice as likely to live in poverty;
- twice as likely to be African American;
- 40% less likely to graduate from high school;

- 16% more likely to be taught by a teacher who is new to the school;
- 66% more likely to be taught by a teacher that is not fully certified;
- only about half as likely to be taught by a teacher with National Board Certification. (McCullough & Johnson, 2007, p. 7)

These statistics hold close to true across all states and pose a set of challenges for rural school districts, which parallel urban school districts (McCullough & Johnson, 2007).

High poverty and minority rates within a school district have correlated with low student achievement for the past few decades (Ingersoll, 2012). Teacher turnover rates have been disproportionately high in rural school districts, and as a result, the schools are staffed with less experienced and under-prepared teachers to meet the needs of the students (NCTAF, 2007). Research indicated that teacher attrition is a national issue which does not impact all geographic areas in the same manner (Gagnon & Mattingly, 2012). When the factors are combined (higher teacher turnover rates in rural school districts with high-poverty and high minority rates), the outcome is a widening of the gap in student achievement and in teacher quality (Ingersoll, 2012).

A joint research effort by the America Association of School Administrators (AASA) and the National Rural Education Advocacy Coalition (NREAC) compiled a list of obstacles and realities unique to rural school districts (AASA, 2009). A survey of the members revealed the following:

- The major teaching shortage areas are at the high school level, special education, and in math and science.

- While rural district faced challenges in both recruitment and retention, the responses indicated it was easier getting teachers TO the district and significantly more difficult to keep them in the district.
- Rural school districts report not offering incentives when recruiting and retaining teachers.
- Rural district report a variety of strategies when filling teacher vacancies.
- Salary, location, and housing top the list of factors primarily responsible for the difficulties rural districts faced in recruiting and retaining teachers. (AASA, 2009, p. 1)

The survey was administered in late August and early September, and approximately 300 rural school administrators from 22 states completed the survey (AASA, 2009).

The administrators were asked to report the areas which they considered significant teacher shortage areas (AASA, 2009, p. 2). Major teaching shortages were concentrated at the high school level, in special education, and in math and science (AASA, 2009). Mathematics teachers (Grades 7-12) was the highest reported area at 63%, followed by 58% for science (Grades 7-12), 46% for foreign languages (Grades 7-12), 41% for special education (Grades 7-12), and 35% for special education (Grades K-6) (AASA, 2009, p. 2).

National research supported the findings of the survey and listed math, science, and special education as areas of some shortage, while foreign language was balanced at the national level (American Association for Employment in Education, 2010). Despite the similarity between rural and national data, rural schools were impacted differently than suburban and urban school districts by these shortages (Gagnon & Mattingly, 2012).

The lack of resources available to rural school districts created a significant obstacle in both teacher retention and recruitment (Osterholm et al., 2006).

Close to one-third of the respondents (30%) indicated it was very or extremely difficult to recruit or attract teachers to their school districts, and when the next available response, moderately difficult, was included in the data, the percentage rose to 63% (AASA, 2009). Retaining teachers in the district was reported to be extremely or very difficult (20%) by the survey respondents and rose to 44% when moderately difficult was included in the results (AASA, 2009). Adding to the complexity of the problem was their inability to recruit experienced teachers to rural districts, with the knowledge that research suggests three to five years for a new teacher to become effective in the classroom (Hill-Carter, 2010). Consequently, rural districts were forced to hire inexperienced teachers, and those same teachers would leave prior to becoming effective educators (Hill-Carter, 2010).

Rural school district administrators reported not offering a financial incentive to assist in either recruiting or retaining teachers, 40% and 43%, respectively (AASA, 2009). The most popular incentive listed was formal mentoring, reported at 35% for recruitment and 32% to assist in retention (AASA, 2009). Research supports the correlation between effective mentoring programs and increased teacher retention, and the impact is greater if included as a part of a comprehensive teacher induction program (Gagnon & Mattingly, 2012; Glazerman et al., 2010; Goldrick et al., 2012; Ingersoll, 2012).

The list of factors cited as primarily responsible for difficulties in recruitment and retention of teachers in rural school districts created a basis of support for comprehensive

teacher induction programs. Low teacher salaries, social isolation, and lack of adequate housing each were indicated as a main factor which hindered recruitment and retention of teachers faced by rural school districts (55% each), followed closely by geographic isolation/remoteness at 50% (AASA, 2009). Salary disparity represented a financial obstacle difficult to overcome by rural school districts, but it is a variable which can be controlled by rural school districts, unlike the remaining obstacles which represented geographical and economic realities present in most rural communities (Eppley, 2009; Gagnon & Mattingly, 2012).

Teacher attrition is a national issue, and research has demonstrated an impact in every geographic location, but attrition does not impact all geographic areas in a similar manner (Cowan, 2010). The rates of teacher attrition are higher in areas where poverty levels are high, resources are limited, and working conditions are difficult (Ingersoll, 2012). Rural school districts often represent all of these conditions (Hill-Carter, 2010).

Personal factors significantly impact teacher retention in rural school districts. Teacher and family dynamics are included in this distinction and are often labeled as "turnover beyond control" (Cowan, 2010, p. 36). Personal factors that influence teacher attrition in rural areas include family, finance, and future (Cowan, 2010). These factors are similar across the nation, but rural districts possess a unique set of specific reasons for each (Cowan, 2010).

In *Teacher Attrition and Mobility: From the 2008-2009 Teacher Follow-up Survey* (Hussar & Bailey, 2011), the researchers presented the top 12 reasons cited by teachers for leaving the classroom. Almost every reason related to personal factors, 11 of the 12, and were separated into family dynamics, pursuit of alternate career, and

continuing education all linked directly to the teacher (Cowan, 2010). The reasons rural teachers left the assignment related to either the job or the placement (Cowan, 2010).

Teachers left rural classrooms for personal and family factors, but the specifics were different than those found in urban or suburban districts (Cowan, 2010). The isolation due to physical remoteness combined with the insularity of rural communities provided a challenge for teachers new to the rural school setting and impacted both the personal and family factors related to leaving the district (Fry & Anderson, 2011). The isolation related to the distance from family, shopping, entertainment, opportunities to pursue higher education, and colleagues represented multiple factors attributed to higher attrition rates for rural teachers (Cowan, 2010; Fry & Anderson, 2011).

Rural teachers must identify and adapt to the culture of not only the new building, but of the community itself (Eppley, 2009). Communities in rural areas are sociologically linked to their schools in a manner very unlike urban and suburban areas (Fry & Anderson, 2011). Significant challenges presented by the differences in rural communities prove to be an unforeseen shock for many rural teachers, especially teachers who are familiar with urban or suburban college assignments or upbringings (Fry & Anderson, 2011). The individuals who reside in rural areas often have a deep attachment to the community, and the schools are important symbols at the core of the community (Woodrum, 2009). To find success in a rural school district, it is imperative for new teachers to recognize and respect this unique social dynamic (Woodrum, 2009).

Unfortunately, pre-service training fails, in many cases, to provide teachers headed to rural school districts an understanding of the rural sociological conditions within rural school districts (Barley, 2009). Rural educators have sought special

preparation for new teachers specifically geared toward insertion into rural communities (Barley, 2009), which include:

- Preparation in two or more content areas;
- Specialized courses specifically related to rural teaching;
- Practicum or student teaching in rural setting;
- Training in teaching two or more grade levels in the same room; and
- Training specific to the unique role of the community in rural settings. (p. 11)

Additional experiences cited by rural educators include self-directed professional development practice, effective use of resources via technology to reduce the impact of isolation, and functioning effectively in community service areas outside of the school (Barley, 2009). As expected, this has led to an emergence of strategies designed to train individuals from the rural area as a focus of teacher recruitment in many rural school districts (Barley, 2009).

Several factors commonly found at the core of reasons cited by teachers for leaving a school district are similar for urban, suburban, and rural school districts (Gagnon & Mattingly, 2012). Factors under the control of school administration, such as class size, salary, and supervision, impact teacher attrition rates differently for each type of district (Barley, 2009). Typically, suburban and urban school districts are capable of higher salary levels than rural school districts (Gagnon & Mattingly, 2012). Research has indicated the aforementioned factors are not viewed as the main issues related to leaving a rural school district (Barley, 2009). Ultimately:

> The individuals recruited to teach in a rural school district would need to find rural life appealing in order to stay because the factors cited as integral to

> remaining in a rural school district were directly related to community factors outside the administration's control. (Barley, 2009, p. 10)

The unique characteristics of rural communities, combined with the common obstacles related to increased teacher attrition rates, effectively magnify the difficulties faced by rural school districts in teacher recruitment and teacher retention (Eppley, 2009). Rural school districts have embraced comprehensive teacher induction programs, similar to urban and suburban school districts, as a viable option to increase teacher retention rates (Ingersoll & Strong, 2011). The growing evidence available points to the positive outcomes of a comprehensive teacher induction program for new teachers (Ingersoll & Strong, 2011).

Despite the evidence, administrators in rural school districts are faced with financial restraints unique to rural areas (Reeves, 2003). Comprehensive teacher induction programs bear a cost to the district, and administrators faced with the option of induction programs less demanding on resources often opt for in-school mentors with no release time and little training (Strong & Villar, 2007). Benefit-cost studies have shown compelling arguments for administrators who struggle with the costs associated with a comprehensive teacher induction program (Strong & Villar, 2007).

The study conducted by Strong and Villar (2007) determined the costs to be either one-time or ongoing. Benefits are typically received over a period of time (Strong & Villar, 2007). The research measured only actual financial costs and financial benefits (Strong & Villar, 2007). All major and minor costs were calculated, such as personnel, facilities, program inputs, and teacher inputs, and every opportunity to assign a monetary figure to an associated cost or benefit was provided (Strong & Villar, 2007). Benefits

assessed included potential savings to the district on increased teacher retention, benefits to the district from increases in new teacher effectiveness, and time saved by principals for having to monitor new teachers less than previously required (Strong & Villar, 2007).

The results of the study demonstrated increased teacher effectiveness provided a far greater benefit (47%) than a simple reduction to teacher attrition costs (17%) (Strong & Villar, 2007). Each of the identified four groups—students, new teachers, districts, and states—benefited from an investment in a comprehensive teacher induction program (Strong & Villar, 2007). Students are shown to benefit, although they do not directly invest a monetary amount, as research demonstrates a connection between student achievement and high quality teachers (Fletcher & Strong, 2009; Strong & Villar, 2007). When the costs and benefits were analyzed by Strong and Villar (2007), the data showed a return of $1.66 for each dollar invested in a comprehensive teacher induction program after five years. Investment in comprehensive teacher induction programs appeared to yield positive results for all stakeholders (Strong & Villar, 2007).

Summary

The education profession faces a crisis, which is not a result of a teacher shortage across the country, but rather a crisis of teacher retention (Ingersoll, 2012). Teacher attrition rates have been nationally cited as 16%, with urban and rural school districts consistently registering an attrition rate above the national average, and in some urban and rural districts, teachers have left at twice the rate of teachers leaving suburban school districts (Harrington & Grissom, 2010). The need to retain highly qualified teachers has increased in recent years, spurred by the increased accountability placed on school districts to remain in good standing according to state and federal standards (Harrington

& Grissom, 2010). Rural school districts faced with achieving high standards continue to struggle with teacher retention and are required to approach the issue from a different angle than urban and suburban schools across the nation (Gagnon & Mattingly, 2012).

Teacher induction programs have evolved from one-to-one mentor programs to comprehensive teacher induction programs over the past several decades (Wood & Stanulis, 2009). Each change in the educational landscape presented a new version of teacher induction reflected in the era in which it was conceptualized (Hargreaves & Shirley, 2009; Wood & Stanulis, 2009). Research supported the implementation of a comprehensive teacher induction program as a solution to the teacher retention crisis and ultimately to improve student achievement (Ingersoll & Strong, 2011).

Teacher induction programs progressed from one-to-one mentor programs into systems which include a multi-year endeavor created to reduce the rate of new teacher attrition, accelerate the professional growth of new teachers, increase the level of student achievement, and provide a positive return on investment to the district (Goldrick et al., 2012). The components of a comprehensive teacher induction program include educative mentor preparation, reflective practices led by mentors, systematic and structured observations, professional development customized to the needs of the new teacher, formative teacher assessment, administrator support, and accountability included in the program (Wood & Stanulis, 2009). The evolution of teacher induction programs has been guided by state and federal policy and has moved to the forefront of the list of priorities for school districts across the nation (Goldrick et al., 2012).

Rural school districts possess a unique set of challenges in both recruitment and retention of teachers (Eppley, 2009). A survey of rural school superintendents indicated

retention was more of an issue than recruitment given the connection between recruitment and economic conditions (AASA, 2009). Personal and professional factors influence teacher retention rates in rural school districts, but the geographic isolation and social dynamics found in rural communities add unique obstacles for new teachers in rural areas (Eppley, 2009). Barley (2009) concluded, "The individuals recruited to teach in a rural school district would need to find rural life appealing in order to stay" (p. 10). New teachers entering a rural school district need a teacher induction program which provides an understanding of the rural community, the unique social dynamics present, and the necessary support to become an effective teacher within the school (Barley, 2009). Rural school districts face decisions based on financial constraints, which led to the significance of this study focused on high-performing rural school districts.

Regardless of the robust argument for the investment in a comprehensive teacher induction program by Strong and Villar (2007), the financial constraints faced by rural school administrators are obstacles to any expenditure beyond simply keeping the school doors open and paying teachers. It is necessary to identify specific components of teacher induction programs, at least in the beginning, and the relationship to teacher retention rates to provide a cost-effective approach for rural school districts as they begin to create teacher induction programs (Kang & Berliner, 2012). The results of this study provided an answer to specific questions about the relationship between teacher induction programs and teacher retention rates, and perhaps more importantly, additional pertinent questions for rural school district administrators and future researchers.

Discussed in Chapter Three is the methodology used to conduct the study. Following the problem and purpose overview are the research questions and hypotheses.

A rationale for selecting a quantitative design is presented, and the population and sample procedures are detailed. Also, the processes involving data collection and data analysis are explained.

Chapter Three: Methodology

Rural school districts face a series of unique challenges in recruitment and retention of teachers (Gagnon & Mattingly, 2012). Rural school districts are faced with factors such as salary, benefits, and specific aspects of the working conditions present in the schools. Conditions specific to rural district administrators include geographic and professional isolation and the cultural nuances of rural communities (Gagnon & Mattingly, 2012).

Several years ago, school districts across the nation turned to comprehensive teacher induction programs to solve the issue of increasing teacher attrition rates, especially among new teachers (Goldrick et al., 2012). Rural school districts implemented induction programs at an increased rate to solve the unique challenges of teacher retention in rural school districts (Eppley, 2009). The current study sought to determine the relationship between teacher induction programs and teacher retention rates specific to high-performing rural school districts. In addition, the specific components of teacher induction programs found in high-performing rural school districts were examined.

The methodology used to create and obtain data relevant to the study is presented in this chapter. Following a detailed explanation of the population size and characteristics of the sample used for the collection of data, instrumentation and data analysis techniques are discussed. Additionally, rationale is provided for selecting top-performing rural school districts to highlight specific teacher induction components implemented, including a description of how these top-performing districts were determined.

Problem and Purpose Overview

Rural school districts face a unique set of challenges recruiting and retaining teachers (Gagnon & Mattingly, 2012). They experience geographic isolation, social dynamics specific to small communities, and financial limitations (Gagnon & Mattingly, 2012). While the geographical, social, and financial aspects are often beyond the control of rural school administrators, a support system for new teachers is a variable which can be altered to retain and grow high quality educators (Barley, 2009). Comprehensive teacher induction programs are identified as a long-term solution to the problem of teacher retention for rural school districts (Barley, 2009).

The research data suggest there are various types of induction programs, practices, activities, and supports, and these seldom exist in isolation (Ingersoll, 2012). School districts usually provide bundles of components to beginning teachers (Ingersoll, 2012). The most common package consists of two basic elements: working with a mentor and regular contact with the building-level administrator (Ingersoll, 2012). According to Ingersoll (2012), teachers receiving these two supports have better retention rates than those who receive no induction at all, but the difference is small (Ingersoll, 2012). When common planning time and reduced class load were added to the basic bundle, a much larger positive impact on teacher retention was realized for beginning teachers (Ingersoll, 2012).

The purpose of this study was to collect data about teacher induction programs implemented by high-performing rural Missouri school districts in order to determine if there existed a relationship between the degree of implementation of teacher induction programs and teacher retention rates. Additionally, this study described specific

components of teacher induction programs utilized by high-performing rural school districts with 100% teacher retention rates from 2009-2012. Results of the research provided rural school administrators with information designed to aid the development of teacher induction programs.

Research Questions

The following research questions guided the study:

1. What is the relationship between the degree to which the teacher induction program is implemented and teacher retention rates in high-performing rural school districts in Missouri?

2. What is the relationship between specific components of a teacher induction program and teacher retention rate in high-performing rural school districts in Missouri?

3. What components of teacher induction programs are used in high-performing rural school districts with 100% teacher retention rates and describe them.

Null hypotheses. This is designated by the symbol H_o:

$H1_o$: There is no relationship between the degree in which the teacher induction program is implemented and teacher retention rates in high-performing rural school districts in Missouri.

$H2_o$: There is no relationship between specific components of a teacher induction program and teacher retention rate in high-performing rural school districts in Missouri.

Alternate hypotheses. This is designated by the symbol H_a:

$H1_a$: There is a relationship between the degree in which the teacher induction program is implemented and teacher retention rates in high-performing rural school districts in Missouri.

$H2_a$: There is a relationship between specific components of a teacher induction program and teacher retention rate in high-performing rural school districts in Missouri.

Rationale for Quantitative Research

Survey responses represent discrete quantitative variables which are ordered and ranked (Bluman, 2009). A quantitative study was used to determine a degree of implementation based on the scoring guide created for this study and the teacher retention rate calculated from survey responses. Determining the degree of implementation required an ordinal level of measurement to classify data into categories that could be ranked (Bluman, 2009). Quantitative research methods provided two sets of ordinal data, or variables, required to determine the strength and direction of a linear relationship between the two variables using the Pearson product moment correlation coefficient (PPMC) (Bluman, 2009). Data included results of a survey questioning components of teacher induction programs implemented by each district, the number of teachers hired during the cohort year (2009-2010), and the number of teachers still employed during the 2012-2013 school year.

Research Design

The definition of rural school districts varies greatly depending on the source. Classifying a school district as rural depends on population density, distance from an urban area, and school locale code (Missouri Census Data Center, 2006). The U.S. Census Bureau defines rural as encompassing all population, housing, and territory not included within an urban area (U.S. Census Bureau, 2010). According to the U.S. Department of Education, in order for a school to be eligible for the Small, Rural School

Achievement Program (SRSA), the total number of students in average daily attendance at all the schools served by the Local Educational Agency is fewer than 600 students, and all of the schools are designated with a school locale code of 7 or 8 (U.S. Department of Education, 2013). The Missouri Department of Elementary and Secondary Education list of student enrollment data for 2012-2013 provided a natural break between the school districts listed at 645 students and the next largest district at 663 students. For the purpose of this study, a school district with 650 or fewer students was classified as rural.

Based on this definition, there are 291 rural public school districts in Missouri. The school district configurations range from elementary, middle school, and high school buildings to school districts with only elementary grade levels. For the purpose of this study, no consideration was given to the differences in district configurations.

From the 291 rural school districts, high-performing districts were selected to provide a homogeneous sample of school districts sharing common characteristics which identify them as successful according to state standards. Rural school districts were considered high-performing based on the following factors: (a) the district ranked in the top ten, for rural school districts, in any academic year from 2009-2010 through 2012-2013, or (b) the rural school district achieved Distinction in Performance for two consecutive academic years from 2009-2012.

Using the website School Digger®, lists of all top-performing schools based on combined math and communication MAP scores were accessed and evaluated for rural school districts (Missouri School District Rankings, 2014). The first 10 rural schools to occur in the lists of elementary, middle, and high schools for each of the four years from 2009-2012 were chosen for the population. This listing process did result in duplicate

districts, but in the end, 42 unique districts were identified as high-performing based on this method.

To achieve a larger population for study, rural school districts that received Missouri's annual Distinction in Performance recognition were also included. In order to receive Distinction in Performance, a K-12 school district must meet 13 of 14 performance standards, and a K-8 school district must meet six out of seven standards in addition to meeting all requirements tied to MAP results (Missouri Department of Elementary and Secondary Education, 2011). From 2009 to 2012, Missouri school districts were evaluated using the 14 performance standard model.

The four-year period of time provided a means of selecting high-performing rural school districts achieving Distinction in Performance during a time period when the standards were consistent. The evaluation method changed in 2013, preventing the researcher from using comparable data after the 2012 school year. Lists of schools receiving Distinction in Performance were obtained from the Missouri Department of Elementary and Secondary Education's website and were examined for rural school districts that were awarded this recognition two years in a row. This process resulted in an additional 90 high-performing school districts for this study's sample.

Of the 132 high-performing rural school districts invited to participate in the study, 54 responded, for a response rate of 40.9%. Seven of the 54 school districts indicated they did not hire any new teachers during the 2009-2010 school year, and one district did not respond to this question. These districts were excluded from the data set used to answer the research questions. The average student enrollment of the school districts represented in the sample population was 265, and the median was 227. Of the

54 rural public schools in the sample, 19 school districts contained grades K-8, and the remaining 35 were K-12 districts. Additionally, there were four consolidated school districts in the sample.

Instrumentation

An online survey was the research instrument used to collect data for this study. The survey was created by the researcher to elicit data specific to the degree of implementation of each district's teacher induction program and to calculate the teacher retention rate for the cohort of new teachers entering the district in the 2009-2010 school year and still employed in the district in the 2012-2013 school year. The questions used in the survey were created based on the data compiled from the New Teacher Center's *Review of State Policies on Teacher Induction* (Goldrick et al., 2012). The survey questions represented components identified as common characteristics of successful teacher induction programs. The *Missouri's Mentoring Framework* (MSTA, 2005) was used to establish a minimum requirement for some of the questions based on the guidelines for teacher mentoring programs in Missouri. A complete list of the questions and response options sent to each of the 132 high-performing rural school districts is included in Appendix A. Questions in the survey were either yes or no inquiries, a multiple selection of all responses which applied, or ranked responses related to frequency of a specific event.

The dependent variable, teacher retention rate, was measured by a question asking the districts how many new teachers entered their districts for the 2009-2010 school year and how many of these teachers remained for the 2012-2013 school year (Questions 2 and 3 on the survey). The teacher retention rate was then calculated by dividing the

answer to Question 3 (number remaining after three years) by the response to Question 2 (original number of new teachers). Research has shown that with each year of experience, teachers improve their proficiency and effectiveness during the first seven years (Carroll & Foster, 2010). Teachers gradually reach a plateau after three to five years on the job, with the greatest gains in student achievement returns occurring during the first few years of experience (Clotfelter, Ladd, & Vigdor, 2006). During the first three years in a district, new teachers will receive some form of support from an induction program as they become more effective teachers (Carroll & Foster, 2010).

Calculation of the degree of implementation of the teacher induction program for each school district involved combining questions on the survey to represent various researcher-defined constructs. Additionally, all questions regarding components of the induction program were transformed into dichotomous (yes/no) responses and summed for an overall "degree of implementation" score representing the number of components (ranging from zero to 10) implemented by a district. Higher calculated scores on this summated variable represented an increased degree of implementation of the teacher induction program. The scoring guide used for analyzing the data is explained in Table 1.

Table 1

Scoring Guide for Survey Analysis

Construct	Components	Scoring
Contact Time	• weekly contact time between mentors and new teachers required (Q4) • new teachers required to observe peer teachers (Q9) • new teachers required to meet with administrators beyond evaluations (Q10) • scheduled time for new teachers to collaborate with peer teachers required (Q11) • common planning time with peer teachers provided for new teachers (Q12)	ranked variable; 0 = not required/provided through 3 = most frequently occurring
Above and Beyond	• induction program provided beyond the required two years (Q8) • reduction of class load for new teachers during induction period (Q13)	summed variable; 0 = district offers neither; 1 = district offers one component; 2 = district offers both components
Rigorous Selection	mentor teachers selected who (Q5): • have a minimum of 3 years of teaching in the district • are in the same building as the new teacher • are content experts in new teacher's subject	summed variable; 1 = district requires one component; 2 = district requires any two components; 3 = district requires all three components
Diversified Mentor Team	mentor team exists and is composed of specialists in (Q7): • classroom management • curriculum • lesson planning • assessment strategies • instructional techniques • using student achievement data	summed variable; 1 = team composed of one specialist through 6 = team composed of all six specialists
Overall Degree of Implementation	Induction program includes (Yes/No): • all of the above, with Q5 coded as 1 and 2 components = 0 (not rigorous) and 3 components = 1 (rigorous selection) • plus Q6, mentor training program with ongoing professional development	summed variable; 0 = no induction components present in district through 10 = all induction components present

Data Collection

Upon the approval of the IRB application for this study (see Appendix D), a survey was created for the purposes of obtaining the information needed for this study (see Appendix A). An online survey was sent to the sample of 132 high-performing rural school districts in Missouri. The specific number of new teachers hired for the 2009-2010 school year and the number of those teachers still employed by the districts beginning the 2012-2013 school year were collected from the survey responses to determine the teacher retention rate. An email was sent to 132 administrators with a letter of informed consent (see Appendix C) and a link to the Survey Monkey website containing the survey. Fifty-four rural school district administrators (principals or superintendents) responded to the survey. The individual survey responses were downloaded to a portable document file (PDF) and scored using a rubric created for the purpose of calculating degree of implementation and teacher retention rate. The school district name, score for each survey response, and teacher retention rate were imported into a Microsoft Excel document.

Data Analysis

In order to address the first research question (the relationship between the degree of implementation of the teacher induction program and teacher retention rate), the Pearson product moment correlation coefficient, or PPMC, was used to arrive at a value between -1 and +1 (Bluman, 2009). The resulting number provided a description of relationship between the degree of implementation of the teacher induction programs and teacher retention rates for the research sample. A strong positive linear relationship is represented by a correlational coefficient (*r)* close to +1 and a strong negative linear

relationship is represented by the value of *r* close to -1 (Bluman, 2009). If the value of *r* is close to 0, there is no linear relationship (Bluman, 2009). In addition to the PPMC, the *p* value was utilized to determine if the null hypothesis was rejected based on $p < .05$ (Bluman, 2009).

The second research question (the relationship between specific components of the induction program and teacher retention rate) was examined with the PPMC, depending on whether the component was dichotomous (yes/no; Q5 responses separately; Q6 mentor professional development or none; Q7 mentor team or no team; Q8; Q13) or approximately continuous (Q4, Q9, Q10, Q11, and Q12), respectively. Survey Question 6 represented a nominal variable with six response options, and the relationship between the most-frequently occurring professional development component (professional development on state standards) and retention rate was examined with the PPMC. The correlational coefficient was used to find the *p* values and to determine if there was a significant relationship between the variables.

Additionally, the third research question was addressed through a description of the components of teacher induction programs implemented by high-performing rural schools which achieved a 100% teacher retention rate during the study period. The specific components of teacher induction program were analyzed within the schools with 100% teacher retention rate. The implementation of teacher induction components common to high-performing rural school districts with 100% teacher retention rates was described.

Summary

Rural school districts faced with increased teacher attrition rates, especially among new teachers, implement teacher induction programs to retain and grow high quality teachers for their students (Ingersoll, 2012). This study explored the relationship between implementation of a teacher induction program and teacher retention rates in rural school districts in Missouri. Specifically, high-performing rural school districts were identified and provided information for rural school district administrators faced with increased teacher attrition rates.

The population for this study consisted of Missouri school districts with 650 or fewer students enrolled. From the 291 rural schools identified, the rural school districts which performed in the top 10 for rural school districts on the MAP assessment during the 2009-2013 school years were identified. Additionally, rural school districts which achieved Distinction in Performance during any two years during the same 2009-2013 time span were recognized as high-performing for the purpose of this study.

The degree of implementation of a teacher induction program was determined by calculating a score based on responses to an online survey. The higher the calculated score indicated a greater level of implementation of a teacher induction program by the district. The teacher retention rate was calculated for the cohort of new teachers who entered the district in 2009-2010 and were still employed in 2012-2013.

The PPMC was used to determine relationship between the degree of implementation of teacher induction programs and teacher retention rates for the sample districts. In addition, each specific component of the teacher induction program was compared, using the PPMC, to determine the strength and direction of the relationship

between each component of the induction program and teacher retention rates for the sample districts. Finally, a description of components implemented by high-performing rural school districts with low teacher attrition rates was included to provide information for rural school district administrators as they consider investing in teacher induction programs for their districts.

Chapter Four contains the data analysis for each of the areas described in this chapter. A detailed analysis of the research questions is provided according to the data acquired from the survey responses. The responses for each survey question are analyzed and the strength and direction of the linear relationship, when appropriate, are described using the PPMC to determine a correlational coefficient.

Chapter Four: Analysis of Data

The purpose of this study was to analyze the relationship between the degree of implementation of teacher induction programs and specific components of these programs and teacher retention rates for high-performing rural Missouri school districts. In addition, the research provided a description of specific components of teacher induction programs present in high-performing rural school districts with a 100% retention rate during the years included in the study.

Over the past few decades, the number of beginning teachers has increased and so has the number of teachers eligible for teacher induction programs (Ingersoll, 2012). Teacher induction programs, especially comprehensive programs, require a financial investment which can be difficult for rural school districts to afford (Reeves, 2003). There are limited data and research on the relative costs of induction programs (Ingersoll, 2012). The question arises as to which kinds and amounts of assistance offered through teacher induction programs are most cost-effective (Strong & Villar, 2007). Especially important in rural school districts, the effectiveness of components of induction programs is crucial information for district leaders (Ingersoll, 2012).

Specific components of a comprehensive teacher induction programs were recommended by the New Teacher Center's *Review of State Policy on Teacher Induction* (Goldrick et al., 2012) and were used in combination with the *Missouri's Mentoring Framework* (MSTA, 2005) to create survey questions to gather data from the sample school districts. The survey questions were grouped into four central themes: contact time, mentor selection, diversified mentor teams, and level of commitment to new teacher induction above and beyond the minimum requirements. The data were used to

determine the degree of implementation of teacher induction programs and were compared to the calculated teacher retention rates to determine the strength and direction of the relationship. The relationship between each specific component identified in the survey questions and teacher retention rates was also described in this study. The final portion of the study included a description of specific components implemented by high-performing rural school districts with a 100% teacher retention rate.

Research Questions

The following research questions guided the study:

1. What is the relationship between the degree in which the teacher induction program is implemented and teacher retention rates in high-performing rural school districts in Missouri?

2. What is the relationship between specific components of a teacher induction program and teacher retention rates in high-performing rural school districts in Missouri?

3. What components of teacher induction programs are used in high-performing rural school districts with a 100% retention rate and describe them.

Null hypotheses. This is designated by the symbol H_o:

$H1_o$: There is no relationship between the degree in which the teacher induction program is implemented and teacher retention rates in high-performing rural school districts in Missouri.

$H2_o$: There is no relationship between specific components of a teacher induction program and teacher retention rate in high-performing rural school districts in Missouri.

Alternate hypotheses. This is designated by the symbol H_a:

$H1_a$: There is a relationship between the degree in which the teacher induction program is implemented and teacher retention rates in high-performing rural school districts in Missouri.

$H2_a$: There is a relationship between specific components of a teacher induction program and teacher retention rate in high-performing rural school districts in Missouri.

Descriptive Data

The survey was submitted online to 132 high-performing rural school districts in Missouri. Fifty-four districts responded to the survey. The first three survey questions identified the school district, the total number of new teachers entering the district in 2009-2010, and the total number of teachers still employed by the district in 2012-2013. The number of new teachers entering in 2009 was 183 (approximately four per school), and the number of those teachers remaining in 2013 was 121 (approximately 2.6 per school).

Survey Questions 4 through 13 were used to determine the degree of implementation of a teacher induction program. Eight of the school districts responded "0" to Question 2, indicating they did not hire any new teachers during the 2009-2010 school year. The figures for teacher retention rates for these districts were not included in the calculations in this study.

To respond to the research questions, a sample size of 46 (n = 46) rural school district superintendents or administrators was employed. The demographic profile of each district was generated as a preliminary statistical analysis. The majority of the rural school districts were K-12 districts. Fourteen districts (30.4%) served students from kindergarten through the eighth grade, and 32 (69.6%) were K-12 school districts. As

Table 2 and Figure 1 indicate, the average teacher retention rate for the K-8 school districts was 69.8%, and the average teacher retention rate for K-12 school districts was 60.1%. The average retention rate per all schools was 63.4%, with the range from 0% to 100%. The mode was 100% retention which identified 20 out of the 46 schools.

Table 2

Teacher Retention Rates by District Configuration 2009-2013

School District Configuration	*n*	Average Teacher Retention Rate per School
K-8	14	69.8%
K-12	32	60.1%
Total	*n* = 46	63.4%

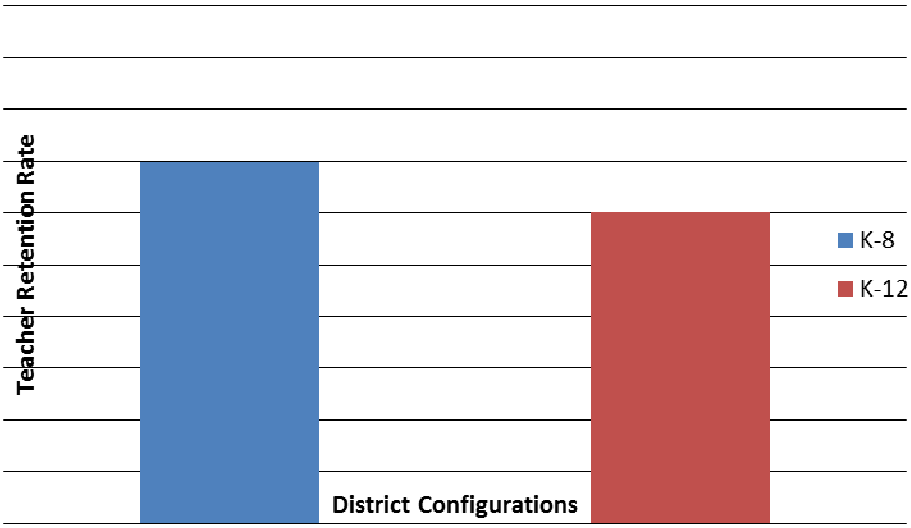

Figure 1. Bar graph comparing teacher retention rates of K-8 and K-12 rural school district configurations for the cohort beginning in 2009 to 2013.

Survey Question 4 asked the degree to which the district required weekly contact time between mentors and new teachers, and results are displayed in Table 3 and Figure 2. Twenty-seven districts responded that there was no requirement for mentors to meet weekly with new teachers. Nineteen districts indicated there was a requirement for mentors to meet with teachers weekly. Of the districts which required mentors to meet weekly with new teachers, nine districts required five additional hours per semester, nine districts required 10 additional hours per semester, and one district required greater than 20 hours of contact time per semester beyond the weekly requirement. School districts which did not require weekly contact time between mentors and new teachers had an average teacher retention rate of 63.78%, and the school districts which required weekly contact time had an average teacher retention rate of 62.84%.

Table 3

Responses to Survey Question 4: Weekly Contact Time

Prompt: My district requires weekly contact time between mentors and new teachers.		
Response Options	Response Count	Response Percentage
My district does not require weekly contact time between mentors and new teachers.	27	58.7%
Yes, and my district also requires 5 additional hours of support for new teachers per semester.	9	19.6%
Yes, and my district also requires 10 additional hours of support for new teachers per semester.	9	19.6%
Yes, and my district also requires 20 additional hours of support for new teachers per semester.	0	0.0%
Yes, and my district also requires greater than 20 hours of additional support for new teachers per semester.	1	2.2%

Note. $N = 46$.

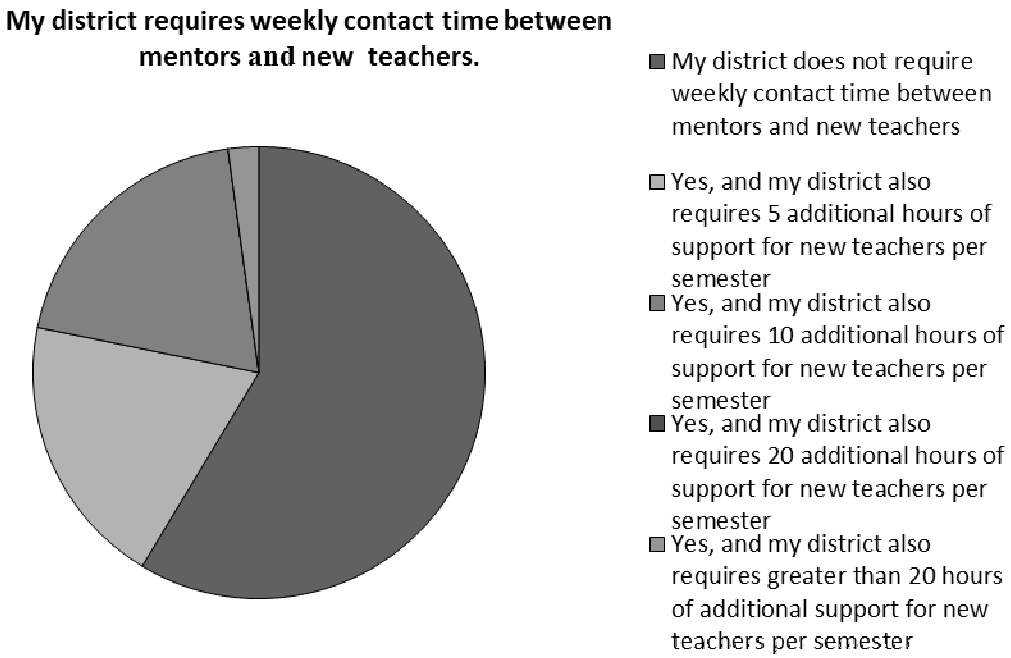

Figure 2. Pie chart depicting hours of weekly contact time between mentors and new teachers required by rural school districts. The chart reflects responses to Survey Question 4, $N = 46$.

The use of a rigorous selection process for selecting teacher mentors (Survey Question 5) allowed the respondents to select as many of the three options that applied. As shown in Table 4, the selections by the respondents were almost equally distributed. The teacher retention rate for each of three groups based on the total number of criteria used to select mentor teachers is displayed in Figure 3. Districts selecting only one criterion ($n = 11$) had a teacher retention rate of 52.45%, districts selecting two criteria ($n = 6$) had a teacher retention rate of 48%, and districts selecting all three criteria ($n = 29$) for selecting mentor teachers had a teacher retention rate of 70.72%.

Table 4

Responses to Survey Question 5: Selection Process for New Mentors

Prompt: My district outlines a rigorous selection process and is utilized when selecting mentor teachers. (Please select ALL of the following which apply.)		
Response Options	Response Count	Response Percent[a]
My district selects mentor teachers who have a minimum of three years teaching in the district.	37	80.4%
My district selects mentor teachers who are in the same building as the new teacher.	36	78.3%
My district selects mentor teachers who demonstrate exemplary command of content area in the subject area the new teacher is responsible.	37	80.4%

Note. $N = 46$.

[a] Percentages do not add to 100 because participants were allowed to select multiple responses.

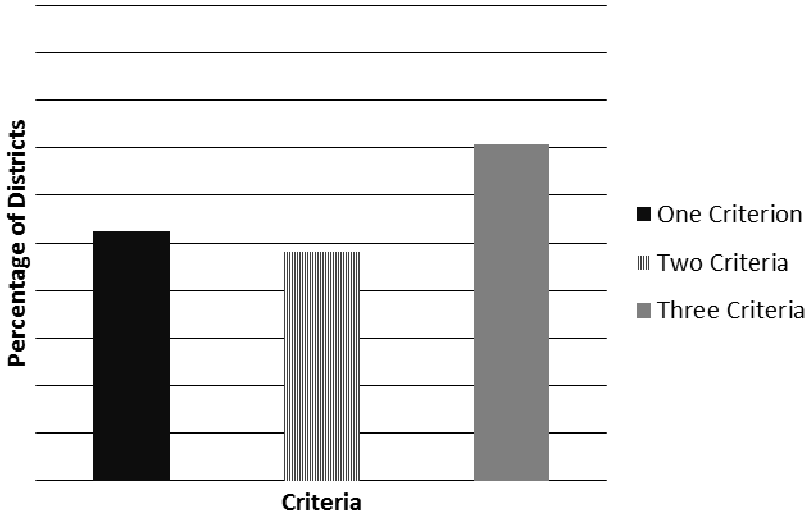

Figure 3. Teacher retention rate based on total number of rigorous mentor selection criteria utilized by the responding districts.

Districts indicated the presence of a mentor training program which provided ongoing professional development for mentor teachers (Question 6), and if present, districts indicated the topics covered. This survey question only allowed one response option to be selected, and results are presented in Table 5. Eighteen districts indicated they did not implement an ongoing mentor training program. The majority (64.3%) of the 28 districts which provided professional development focused on knowledge of the state standards and/or common core standards for mentor teachers. Two districts concentrated the professional development on knowledge of classroom observation strategies, two districts focused on formative assessment strategies, and five districts chose reflective questioning and cognitive coaching strategies. As shown in Figure 4, the average teacher retention rate for the districts, which provided ongoing professional development for mentor teachers, was 62.9%, and the districts which did not provide

ongoing professional development for mentor teachers had an average teacher retention rate of 64.1%.

Table 5

Responses to Survey Question 6: Mentor Training Program and Professional Development

Prompt: My district implements a mentor training program with ongoing professional development.		
Response Options	Response Count	Response Percent
My district does not implement a mentor training program with ongoing professional development.	18	39.1%
My district provides professional development to enhance the knowledge of state standards, or common core standards for mentor teachers.	18	39.1%
My district provides professional development to enhance the knowledge of formative assessment of new teacher performance for mentor teachers.	2	4.3%
My district provides professional development to enhance the knowledge of classroom observation for mentor teachers.	2	4.3%
My district provides professional development to enhance the knowledge of reflective conversations, or cognitive coaching, for mentor teachers.	5	10.9%
My district provides professional development to enhance the knowledge of adult learning theories for mentor teachers.	1	2.2%

Note. $N = 46$.

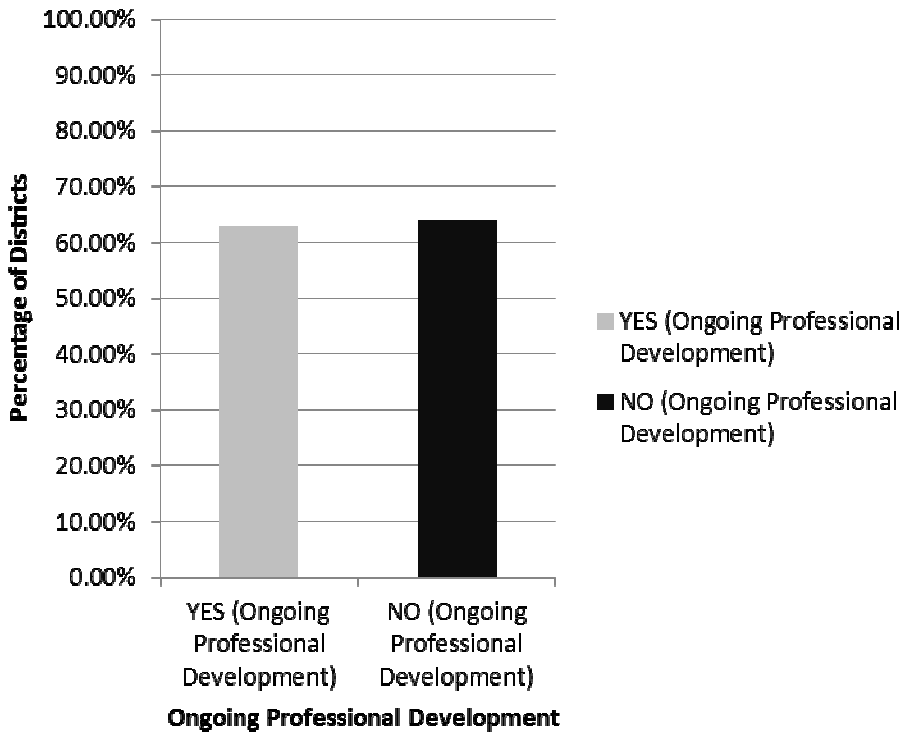

Figure 4. Bar graph comparing teacher retention rates by presence or absence of ongoing professional development for mentor teachers.

The utilization of different mentors specializing in specific areas for beginning teachers was the focus of Survey Question 7. Respondents could select all that applied. The majority of districts (39 of 46) did not have a mentor team, but seven districts indicated they did have at least one mentor with a specific area of expertise. As shown in Table 6, the average teacher retention rate for districts using a mentor team (n = 7) was 62.9%, and the teacher retention rate for districts which did not have a mentor team was 63.5%.

Table 6

Responses to Survey Question 7: Mentor Team and Specialization

Prompt: My district has created a mentor team, specifically, a different specialist to guide and support new teachers in classroom management, curriculum specialist, lesson planning, assessment strategies, instructional techniques, student achievement data.		
Response Options	Response Count	Response Percent
My district has not created a mentor team.	39	84.8%
My district has a mentor who specializes in classroom management.	1	2.2%
My district has a mentor who specializes in curriculum.	4	8.7%
My district has a mentor who specializes in lesson planning.	3	6.5%
My district has a mentor who specializes in assessment strategies.	4	8.7%
My district has a mentor who specializes in instructional techniques.	4	8.7%
My district has a mentor who specializes in using student achievement data.	5	10.9%

Note. $N = 46$.

[a] Percentages do not add to 100 because participants were allowed to select multiple responses.

Responding districts indicated if there was a teacher induction program for new teachers beyond the two years required of Missouri public schools (Question 8). Five of the districts in the sample provided teacher induction programs beyond the required two years, and the remaining 41 responded "no" to Question 8. As shown in Table 7, the average teacher retention rate for these five districts was 55.4%, and the average teacher

retention rate for districts not requiring a teacher induction program longer than two years was 64.4%.

Table 7

Responses to Survey Question 8: Length of Induction Program

Prompt: My district provides an induction program for new teachers beyond the two years required of Missouri public schools.		
Response Options	Response Count	Response Percent
Yes	5	10.9%
No	41	89.1%

Note. $N = 46$

In Survey Question 9, districts responded about the frequency at which new teachers were required to observe a peer teacher. As shown in Table 8, 50% of the sample districts (23) did not require new teachers to observe peer teachers at least once per semester, and 50% of the districts (23) did require new teachers to observe a peer teacher at least once per semester. As shown in Figure 5, the average teacher retention rate for districts which did not require peer observations for new teachers was 58.3%, and the average teacher retention rate for districts with a requirement of at least one peer observation per semester for new teachers was 68.5%.

Table 8

Responses to Survey Question 9: New Teacher Observation of Peers

Prompt: My district requires a new teacher to observe a peer teacher at least one class period per semester.		
Response Options	Response Count	Response Percent
My district does not require new teachers to observe peer teachers.	23	50.0%
My district requires a new teacher to observe a peer teachers classroom at least 2 times per year.	20	43.5%
My district requires a new teacher to observe a peer teachers classroom at least 3 times per year.	1	2.2%
My district requires a new teacher to observe a peer teachers classroom more than 3 times per year.	2	4.3%

Note. $N = 46$.

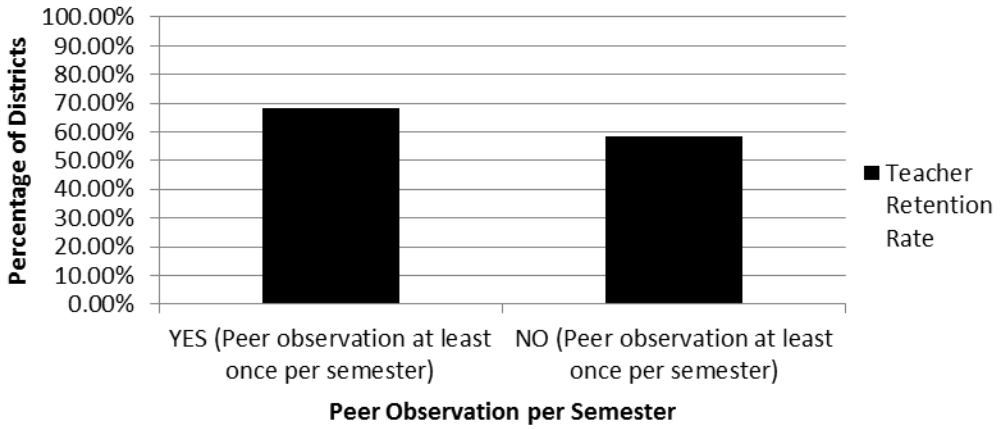

Figure 5. Bar graph comparing teacher retention rates by presence or absence of required new teacher observation of peer teachers.

The district requirement for new teachers to meet with their building principals during the school year outside of the evaluation process was the focus of Question 10 and is reported in Table 9. Question 10 revealed that 15 school districts did not require school administrators to meet with new teachers outside of evaluations during the school year. Thirty-one districts required administrators to meet with new teachers at least two times during the school year. As shown in Figure 6, the average teacher retention rate for districts which required school administrators to meet with new teachers outside of the evaluation process was 59.2% compared to a teacher retention rate of 72.1% for districts which did not require administrators to meet with new teachers outside of evaluations.

Table 9

Responses to Survey Question 10: Extra Meetings with the Building Administrator

Prompt: My district requires new teachers to meet with their building administrator during the school year (not including evaluations).		
Response Options	Response Count	Response Percent
My district does not require new teachers to meet with their building administrators during the school year beyond evaluations.	15	32.6%
My district requires new teachers to meet with their building administrator 2 times during the year (not including evaluations).	18	39.1%
My district requires new teachers to meet with their building administrator 3 times during the year (not including evaluations).	2	4.3%
My district requires new teachers to meet with their building administrator more than 3 times during the year (not including evaluations).	11	23.9%

Note. $N = 46$.

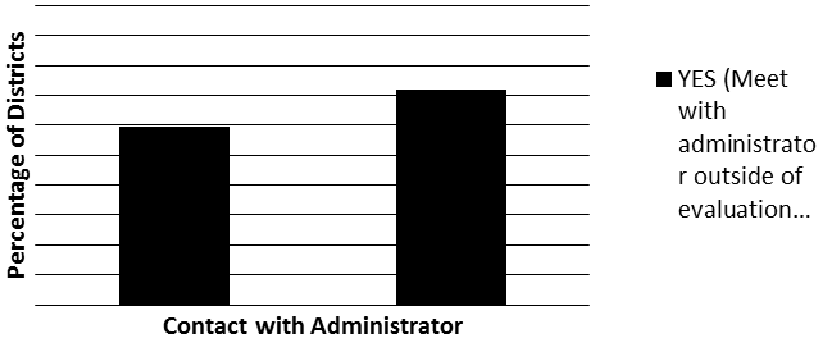

Figure 6. Bar graph comparing teacher retention rates by presence or absence of required additional meetings with the building administrator.

The district requirement regarding scheduled collaboration time for new teachers and their peers was the focus for Question 11, and response counts are presented in Table 10. As shown in Figure 7, districts which did not require scheduled collaboration time had an average teacher retention rate of 79.25%, whereas districts which did require scheduled collaboration time had an average teacher retention rate of 54.93%. Specifically, districts which scheduled collaboration time for new teachers and their peers once per semester had an average teacher retention rate of 62%. Districts which scheduled collaboration time quarterly had an average teacher retention rate of 41.22%, and those which had a weekly scheduled collaboration time had an average teacher retention rate of 64.75%.

Table 10

Responses to Survey Question 11: Collaboration Time between New and Peer Teachers

Prompt: My district requires scheduled time for collaboration with peer teachers.		
Response Options	Response Count	Response Percent
My district does not require scheduled time for collaboration with peer teachers.	16	34.8%
My district provides scheduled time for new teachers to collaborate once per semester with their peers.	8	17.4%
My district provides scheduled time for new teachers to collaborate quarterly with their peers	10	21.7%
My district provides scheduled time for new teachers to collaborate weekly with their peers.	9	19.6%
My district provides scheduled time for new teachers to collaborate daily with their peers.	3	6.5%

Note. $N = 46$.

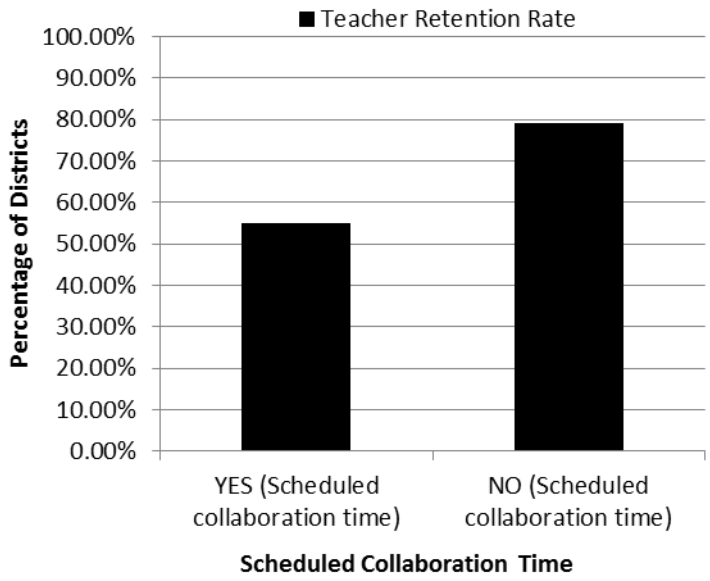

Figure 7. Bar graph comparing teacher retention rates by presence or absence of scheduled collaboration time between new and peer teachers.

Common planning time required by the school district for new teachers with their peer teachers was the focus of Question 12, and responses are listed in Table 11. As shown in Figure 8, the districts which provided common planning time for new teachers had an average teacher retention rate of 61.72%, and the districts which did not provide common planning time had an average teacher retention rate of 64.46%. Further, districts which provided common planning time once per quarter had an average teacher retention rate of 61.17%. The districts requiring weekly common planning time for new teachers had an average teacher retention rate of 50%. School districts which provided daily common planning time for new teachers had an average teacher retention rate of 68%.

Table 11

Responses to Survey Question 12: Common Planning Time between New and Peer Teachers

Prompt: My district provides new teachers with common planning time with peer teachers.		
Response Options	Response Count	Response Percent
My district does not provide new teachers with common planning time with peer teachers.	28	60.9%
My district provides common planning time for new teachers and their peers once per quarter.	6	13.0%
My district provides common planning time for new teachers and their peers once per week.	4	8.7%
My district provides common planning time for new teachers and their peers daily.	8	17.4%

Note. $N = 46$.

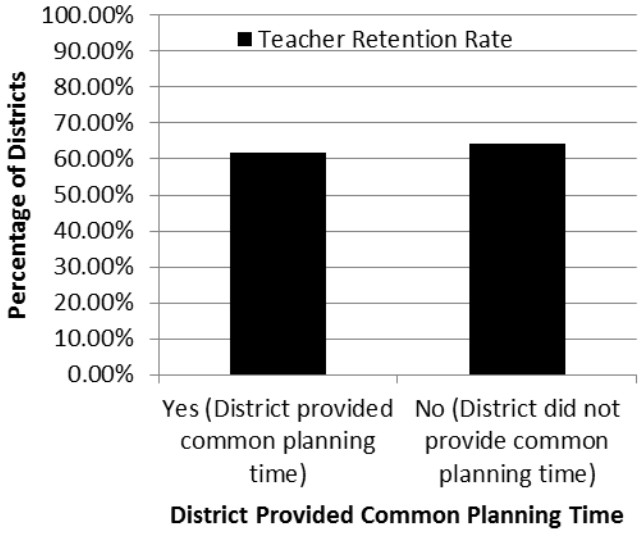

Figure 8. Bar graph comparing teacher retention rates by presence or absence of scheduled common planning time between new and peer teachers.

The reduction of the class load or modification of the teaching assignment of a new teacher for the duration of their induction period was the focus of Question 13; response counts are presented in Table 12. Six districts reduced or modified the teaching assignment of new teachers during the duration of their induction periods. The average teacher retention rate for these districts that reduced the load was 75%. The 40 districts which responded they did not modify or reduce teaching assignment for new teachers had an average teacher retention rate of 61.6% (see Figure 9).

Table 12

Responses to Survey Question 13: Reduction or Modification of New Teacher Schedules

Prompt: My district reduces the class load or modifies the teaching assignment of a new teacher for the duration of their induction period.		
Response Options	Response Count	Response Percent
Yes	6	13.0%
No	40	87.0%

Note. $N = 46$.

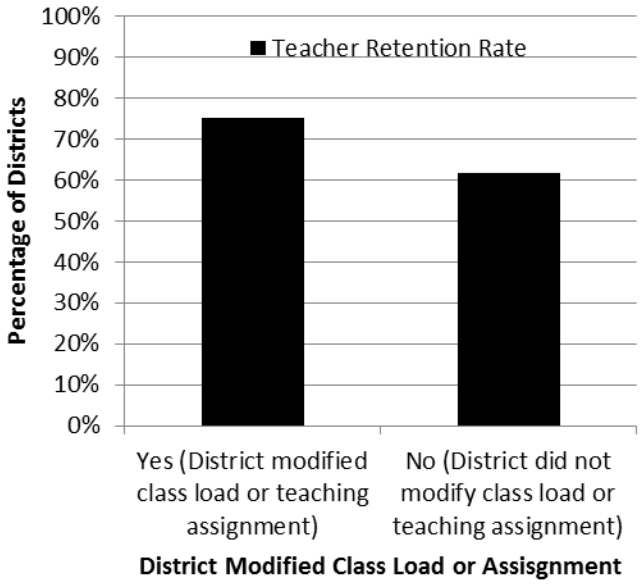

Figure 9. Bar graph comparing teacher retention rates of districts that modified new teacher schedules to districts that did not modify new teacher schedules.

Results

Study results were presented by research question and included statistical analyses (RQ1 and RQ2) and descriptive components (RQ3).

Research question 1. The first research question asked, "What is the relationship between the degree in which the teacher induction program is implemented and teacher retention rates in high-performing rural school districts?" The data used to determine the relationship between the two variables involved two sets of numbers: the teacher retention rate for each district and the degree of implementation determined by the total score based on the responses to the survey. Using the PPMC, the data yielded (see Table 12) the coefficient $r = -.027$ and $p = .861$ for the overall degree of implementation. As a result of $p > .05$, the null hypothesis was not rejected; therefore, there was no relationship between the degree in which the teacher induction program is implemented and teacher retention rates in high-performing rural school districts.

Additionally, the responses were grouped into separate constructs designed to describe the relationships between teacher retention rates and contact time, districts implementing induction components above and beyond minimum requirements, mentor selection process, and mentor team approach. As shown in Table 13, the coefficient was $r = -.105$ for contact time and $r = .034$ for the above and beyond questions with p values of .488 and .822, respectively. Since $p > .05$ for both constructs, there was no significant relationship between either group of questions and teacher retention rate. The responses from Question 5 regarding the mentor selection criteria showed $r = .214$ ($p = .153$), and the mentor team approach to induction (Question 7) with $r = .387$ ($p = .344$) indicated a possible meaningful correlation, although the p-values for both were greater than .05 and the findings were, therefore, not statistically significant.

Table 13

Correlations between Retention Rate and Degree of Implementation of Teacher Induction Program Constructs

	Retention Rate	*p*
Contact Time	-.105	.488
Above and Beyond	.034	.822
Rigorous Selection	.214	.153
Diversified Mentor Team[a]	.387	.344
Overall Degree of Implementation	-.027	.861

Note. $N = 46$

[a] $N = 8$

Research question 2. The second research question asked, "What is the relationship between specific components of a teacher induction program and teacher retention rate in high-performing rural school districts in Missouri?" Research Question 2 was examined with the PPMC, depending on whether the component was dichotomous (yes/no; Q5 responses separately; Q6 mentor professional development or none; Q7 mentor team or no team; Q8; Q13) or approximately continuous (Q4, Q9, Q10, Q11, and Q12), respectively. Question 6 represented a nominal variable with six response options, and the relationship between the most-frequently occurring professional development component (professional development on state standards) and retention rate was also examined. The results of the PPMC are displayed in Table 14 and Table 15.

Table 14

Correlations between Retention Rate and Specific Components of Teacher Induction Program Constructs

	Retention Rate	*p*
Weekly Contact Time between Mentors and New Teachers (Q4)	-.009	.955
New Teachers Required to Observe Peer Teachers (Q9)	.074	.625
New Teachers Required to Meet with Building Administrators (beyond Evaluations; Q10)	-.085	.574
Scheduled Time for New Teacher Collaboration with Peer Teachers (Q11)	-.218	.145
New Teachers Provided Common Planning Time with Peer Teachers (Q12)	-.005	.976

Survey question 4: My district requires weekly contact time between mentors and new teachers. The respondents were asked to identify how much, if any, contact time was required between beginning teachers and mentors (Q4). Using the PPMC, the data showed the coefficient r = -.009 for the relationship between contact time and new teacher retention rate. Since p=.955 and was greater than .05, there was no significant relationship between the amount of contact time required by a district and the district teacher retention rate.

Table 15

Correlations between Retention Rate and Specific Components of Teacher Induction Program Constructs

	Yes	No		
	Retention Rate Mean (*SD*)		*r*	*p*
Mentor Selection Requirements (Q5)				
Three years teaching experience	64.57 (39.2) *n* = 37	58.56 (46.9) *n* = 9	.06	.693
Teaches in same building as new teacher	65.78 (40.16) *n* = 36	54.8 (42.1) *n* = 10	.113	.453
Expert command of content area	68.89 (38.4) *n* = 37	40.78 (42.6) *n* = 9	.279	.060
Mentor Training with Ongoing Professional Development (Q6)	62.93 (38.9) *n* = 28	64.11 (43.8) *n* = 18		.924
Mentor Professional Development Training on State Standards (Q6)	64.11 (40.3) *n* = 18	62.93 (41.1) *n* = 28	-.096	.924
Mentor Team of Specialists to Guide New Teacher (Q7)	62.86 (48.2) *n* = 7	63.49 (39.5) *n* = 39	.005	.970
Induction Program for New Teachers Beyond Two Years (Q8)	55.4 (51.4) *n* = 5	64.37 (39.5) *n* = 41	-.069	.644
Class Load Reduced or Schedule Modified for New Teachers (Q13)	75.0 (41.8) *n* = 6	61.65 (40.4) *n* = 40	.112	.456

Note. Standard deviations in parentheses.

Survey question 5: My district outlines a rigorous selection process and is utilized when selecting mentor teachers. The next component of teacher induction programs identified by the survey related to the process used to select mentor teachers. The respondents were asked to select all of the criteria which applied to the district's mentor selection process. The responses to Question 5 were almost evenly distributed.

The data showed the coefficient $r = .214$ and $p = .153$ (see Table 13). Although $p > .05$ and indicated there was no significant relationship, it represented the lowest p value of any of the constructs of teacher induction programs used in this study. As Table 15 shows, the difference in retention rates between districts which selected a mentor teacher based on exemplary command of content area in the subject area and districts who did not do this was the closest to being significant ($p = .060$) based on the coefficient $r = .279$. This was part of the construct (rigorous selection) which had the greatest difference in retention rates (between "yes" and "no" responses on the variable) and further explained what was seen in the correlation results.

Survey question 6: My district implements a mentor training program with ongoing professional development. The next question determined the specific type of ongoing mentor training program implemented by the district. The respondents were asked to select all of the criteria which applied to the district's mentor professional development program. The data showed (see Table 15) $p = .924$ was greater than .05 which indicated there was no significant difference between the implementation of ongoing professional development for mentor teachers and a district's teacher retention rate.

Survey question 7: My district has created a mentor team, specifically, a different specialist to guide and support new teachers in classroom management, curriculum specialist, lesson planning, assessment strategies, instructional strategies, or student achievement data. The respondents indicated if the district implemented a mentor team approach to teacher induction (Q7). The survey question asked if the district had different mentors specializing in classroom management, curriculum, lesson

planning, assessment strategies, instructional techniques, and student achievement data. As shown in Table 15, the coefficient r =.005 was non-significant (p = .970); there was no significant relationship between the implementation of a mentor team approach for teacher induction, versus not implementing a team, and the teacher retention rate. However, of the districts that did use a mentor team, the number of specialists on the team was positively correlated with retention rate (see Table 13). The sample size was small (n = 8), and the relationship was non-significant (r = .387; p = .344), but there was a possible meaningful correlation which could be investigated further.

Survey question 8: My district provides an induction program for new teachers beyond the two years required of Missouri public schools. The districts were asked if they provided an induction program beyond the two years required of Missouri public schools. As shown in Table 15, there was no significant relationship, as determined by the coefficient r = -*.069*, between providing a teacher induction program beyond the two years required of Missouri public schools and the teacher retention rate (p = .644 and p > .05).

Survey question 9: My district requires a new teacher to observe a peer teacher at least once per semester. The districts were asked if new teachers were required to observe peer teachers. In Table 14, the coefficient was r = .074 and p = .625. Because p > .05, there was no significant relationship between contact time required of a new teacher to observe peer teachers and the teacher retention rate.

Survey question 10: My school district requires new teachers to meet with their building administrator during the school year (not including evaluations). The districts were asked if there was a required number of meetings between teachers and

administrators outside of the evaluation process. The data yielded a coefficient r = -.085 and p = .574 (see Table 14). Because p > .05, there was no significant relationship between the amount of contact time new teachers had with administrators and the teacher retention rate.

Survey question 11: My district requires scheduled time for collaboration with peer teachers. The districts were asked if there was a required scheduled collaboration time for new teachers with their peer teachers. The coefficient was r = -.218 and p = .145. As a result of p > .05, there was no significant relationship between required scheduled collaboration time between new teachers and their peers and the teacher retention rate.

Survey question 12: My district provides new teachers with common planning time with peer teachers. The districts were asked if common planning time was provided for new teachers with their peers. The data (as shown in Table 14) yielded the coefficient r = -.005 and p = .976. As a result of p > .05, there was no significant relationship between providing common planning time for new teachers with their peers and the teacher retention rate.

Survey question 13: My district reduces the class load or modifies the teaching assignment of a new teacher for the duration of their induction period. The reduction of a new teacher's class load or modification of his or her teaching assignment was indicated by either a "yes" or "no" answer in the survey. The coefficient r = *.112*, presented in Table 15, yielded p = .456, and since p > .05, there was no significant relationship between the reduction of class load or modification of teaching assignment

for a new teacher during the duration of his or her induction period and the teacher retention rate.

Research question 3. The third research question asked, "What components of teacher induction programs are used in high-performing rural school districts with a 100% retention rate and describe them?" Of the 46 high-performing rural school districts in the sample, 20 districts indicated 100% of the new teachers hired in the 2009-2010 school year were still employed by the district in the 2012-2013 school year. A review of the data of the districts with a 100% teacher retention rate revealed positive trends regarding three components of teacher induction programs: rigorous selection process (Question 5), observation of peer teachers (Question 9), and meeting with building administrators (Question 10). Positive trends were identified from survey question responses where it was apparent there were a large number of districts which answered "yes" within the group of 20 districts with 100% new teacher retention.

Survey question 5: My district outlines a rigorous selection process and is utilized when selecting mentor teachers. Seventeen of the 20 (85%) high-performing rural school districts with 100% teacher retention rate for the duration of this study selected all three of the responses provided as part of the process for selecting mentor teachers. The available selections were: 1) my district selects mentor teachers who have a minimum of three years teaching in the district; 2) my district selects mentor teachers who are in the same building as the new teacher; and 3) my district selects mentor teachers who demonstrate exemplary command of content area in the subject area for which the new teacher is responsible.

Survey question 9: My district requires new teachers to observe a peer teacher at least one class period per semester. The majority (14 of 20, or 70%) of the districts with a 100% teacher retention rate indicated they required new teachers to observe a peer teacher at least once per semester. One of the 14 school districts required a new teacher to observe a peer teacher more than three times per year.

Survey question 10: My district requires new teachers to meet with their building administrator during the school year (not including evaluations). Twelve of the 20 school districts (60%) required their building administrators to meet with new teachers at least two times per year outside of evaluations. Additionally, six of the 20 school districts with 100% teacher retention rates required administrators to meet with new teachers at least three times during the school year.

Summary

Chapter Four outlined the data collected from the survey responses from the high-performing rural school districts included in the sample for this study. The analysis of the data revealed there was no significant relationship between the degree to which a teacher induction program was implemented and teacher retention rates in high-performing rural school districts in Missouri. Although the teacher retention rates for the school districts represented in the sample for this study averaged 63.4%, there was no relationship between the degree in which a teacher induction program was implemented and the teacher retention rate in high-performing rural school districts.

Specific components identified for the purposes of this study, common to successful teacher induction programs, were not related to the teacher retention rates for the sample districts. Survey Question 5, which involved information about the selection

process for mentor teachers, displayed the highest positive correlation (r = .214) with retention rate; the more mentor selection criteria employed, the higher the retention rate, although this relationship was not significant (p = .153). For each of the components of teacher induction programs, $p > .05$; as a result, none of the null hypotheses were rejected. Therefore, there was no relationship between specific components of a teacher induction program and teacher retention rate.

The study revealed trends in three components of teacher induction programs for high-performing rural school districts with 100% teacher retention rates. First, 85% of the districts responded they selected mentor teachers based upon all three available responses, indicating a rigorous mentor selection process. Second, 70% of the districts required new teachers to observe peer teachers at least once per semester. Finally, 60% of the districts required building administrators to meet with new teachers at least two times per year.

Discussed in Chapter Five are a summary of the study, the findings, and conclusions based on the results. Implications for practices are also presented. The final portion of Chapter Five provides recommendations for further research and possible steps which might be followed based on the findings of this study.

Chapter Five: Summary and Conclusions

The final chapter of this dissertation is organized into several key areas, including a summary of the study, summary of findings and conclusions, implications for practice, and recommendations for future research. Specifically, this research focused on the relationship between the degree to which a teacher induction program was implemented with specific components and the teacher retention rate for high-performing rural school districts in Missouri. Additionally, the research revealed trends of high-performing rural school districts with 100% teacher retention rates for three of the components of teacher induction programs in this study.

Summary of the Study

Teachers encounter significant challenges upon entering the profession (Ingersoll & Strong, 2011). Some of these challenges are difficult work assignments, unclear expectations, inadequate resources, and a sense of being overwhelmed by the demands of the profession (Lawrason, 2008). In addition, rural school teachers face geographic isolation, lower pay, requirements to teach multiple subjects, and acclimation to the unique characteristics of rural communities (Hammer et al., 2005). Thus, rural school districts must provide support during the first year of teaching and subsequent years in order to retain and grow teachers in rural school districts (Hammer et al., 2005).

The problem statement was that rural school districts face a different set of challenges in implementing a teacher induction program. Faced with limited resources due to smaller populations, geographic isolation, and a smaller pool of applicants, rural school districts are at a disadvantage in regards to teacher recruitment and retention (Reeves, 2003). This study explored teacher induction programs of high-performing

rural school districts in Missouri and determined if there was a relationship between teacher induction programs and teacher retention rates. Furthermore, this study examined trends in teacher induction programs for high-performing rural school districts with 100% teacher retention rates for the duration of this study.

The New Teacher Center released a review of state policies on teacher induction in 2012 which offered a series of recommendations based on current research on teacher induction programs and current state policies (Goldrick et al., 2012). The recommendations included the establishment of a multi-year induction program for all new teachers; the use of rigorous selection criteria for mentor teachers and ongoing mentor professional development; scheduled contact time for new teachers with mentors, peer teachers, and administrators; and reduction of teaching load and assignments for beginning teachers (Goldrick et al., 2012). The survey questions used in this study were created using these recommendations.

The research suggests there are benefits to teachers and their students which accrue when a multi-year course of support is implemented by a district (Glazerman et al., 2010). Additionally, research suggested there was a positive impact on student achievement in the third year of a teacher induction program (Glazerman et al., 2010). This study included a survey question designed to determine if the sample districts required more than the two years required by the state of Missouri for public school teachers.

At the heart of high quality teacher induction programs there must be a focus on effective mentors (Goldrick et al., 2012). The selection and ongoing professional development of teacher mentors is critical to the support and development of beginning

educators (Goldrick et al., 2012). Two of the questions in the survey employed in this study asked the respondents to describe the process used to select mentors and ongoing professional development required of mentor teachers.

Contact time between new teachers and mentor teachers, colleagues, and administrators is another critical element of teacher induction programs (Goldrick et al., 2012). The New Teacher Center typically recommends 1.25-2.5 hours per week of contact time between new teachers and their mentors (Goldrick et al., 2012). Classroom observation of effective peer teachers is a crucial component of a teacher induction programs and provides another opportunity to increase contact time between new teachers and their colleagues (Goldrick et al., 2012). The support and contact with administrators is cited as an important factor for teachers when determining whether to leave a school or district (Boyd, Grossman, Ing, Lankford, & Wyckoff, 2009).

There are currently five states which articulate an option within the state teacher induction policy to reduce class loads for beginning educators (Goldrick et al., 2012). The requirement of optimum working conditions for beginning teachers includes limited preparations, limited non-instructional duties, and no extracurricular assignments for the duration of the induction period (Goldrick et al., 2012). The intent of this component revolved around allowing time for the new teacher to adjust to the profession and allowing time to meet with mentor teachers, peers, and administrators in order to build a support system within the district and building (Boyd et al., 2009).

Rural school districts face a unique set of challenges recruiting and retaining teachers (Gagnon & Mattingly, 2012). They experience geographic isolation, social dynamics specific to small communities, and financial limitations (Gagnon & Mattingly,

2012). While the geographical, social, and financial aspects are often beyond the control of rural school administrators, a support system for new teachers is a variable which can be altered to retain and grow high quality educators (Gagnon & Mattingly, 2012). Comprehensive teacher induction programs are identified as a long-term solution to the problem of teacher retention for rural school districts (Barley, 2009).

Findings

The survey was sent via email and responses were collected for the 46 high-performing rural school districts in the sample. Responses were analyzed and interpreted based on the initial research questions.

Research question 1: What is the relationship between the degree in which the teacher induction program is implemented and teacher retention rates in high-performing rural school districts in Missouri? Data used to determine the relationship between the two variables involved two sets of numbers: the teacher retention rate for each district and the degree of implementation determined by the total score based on the responses to the survey. Using the PPMC, the data showed (see Table 13) the coefficient $r = -.027$ and $p = .861$ for the overall degree of implementation. As a result of $p > .05$, the null hypothesis was not rejected. The r was not significantly different from 0 (zero) and was probably due to chance (Bluman, 2009); therefore, there is no relationship between the degree in which the teacher induction program is implemented and teacher retention rates in high-performing rural school districts

Research question 2: What is the relationship between specific components of a teacher induction program and teacher retention rate in high-performing rural school districts in Missouri? Specific components of successful teacher induction

programs were not related to the teacher retention rates for the sample districts. Survey Question 5, which involved information about the selection process for mentor teachers, displayed one of the highest positive correlations and lowest p values ($r = .214$; $p = .153$), but this correlation was not statistically significant. The number of specialists on a mentor team had the highest correlation with retention rate, but the sample size was small ($n = 8$), and the relationship was non-significant ($r = .387$; $p = .344$). For each of the components of teacher induction programs, $p > .05$; as a result, the null hypothesis was not rejected. Therefore, there is no relationship between specific components of a teacher induction program and teacher retention rate.

Research question 3: What components of teacher induction programs are used in high-performing rural school districts with a 100% retention rate and describe them. The study revealed trends in three components of teacher induction programs for high-performing rural school districts with 100% teacher retention rates. First, 85% of the districts responded they selected mentor teachers based on all three available responses, indicating a rigorous mentor selection process. Second, 70% of the districts required new teachers to observe peer teachers at least once per semester. Finally, 60% of the districts required building administrators to meet with new teachers at least two times per year.

Conclusions

Research question 1: What is the relationship between the degree in which the teacher induction program is implemented and teacher retention rates in high-performing rural school districts in Missouri? Although this study indicated there is no relationship between the degree to which a district implements a teacher induction

program and teacher retention rates, the data yielded interesting contributions to the limited research on high-performing rural school districts. As shown in Table 16, the median and mode of overall degree of implementation for the sample districts was five and six (out of 10) components, respectively. This indicated the high-performing rural school districts in this study implemented comprehensive teacher induction programs beyond the most basic package, which typically consists of two components (an assigned mentor and required contact with administrators) (Ingersoll, 2012).

Additionally, there was some indication that the number of mentor-selection criteria is positively related to retention rate, as is the number of specialists on a mentor team. This last result was in line with Smith and Ingersoll (2004), who suggested collective induction activities, or a group of new teachers sharing the same interests and goals, is a more effective component of teacher induction programs than collaborating with peers. Interestingly, contact time with peer teachers or building administrators was negatively related to retention rate. Perhaps in rural school districts it is the quality of the mentors selected rather than the time spent with them that matters for new teacher retention.

The research was inconclusive as to the effectiveness of teacher induction program implementation for rural school districts. There are many components of teaching in a rural school district, such as geographical isolation, distance from peers and personal networks, low salary, and the unique characteristics of a rural community (Gagnon & Mattingly, 2012). The rural school districts in this study faced the same challenges as other rural school districts, which cannot be addressed by the implementation of a teacher induction program.

Table 16

Frequency Distribution of Overall Degree of Implementation Variable

Number of Components	*f*	Percent	Cumulative Percent
8	1	2.2%	100%
7	3	6.5%	97.8%
6	16	34.8%	91.3%
5	10	21.7%	56.5%
4	8	17.4%	34.8%
3	5	10.9%	17.4%
2	3	6.5%	6.5%
$M = 4.96$ $SD = 1.43$	$N = 46$		

Note. Overall degree of implementation is a summed variable with a range from 0 = no induction components present in district through 10 = all induction components present (see Table 1 for more description).

Research question 2: What is the relationship between specific components of a teacher induction program and teacher retention rate in high-performing rural school districts in Missouri? The specific components of teacher induction programs did not statistically demonstrate a relationship to teacher retention rate; however, there were several descriptive details of interest from the data. First, as shown in Table 17, the correlational value (*r)* and the *p* value (.153) for the degree in which a district implements a rigorous selection process for mentor teachers were the most promising of the

components selected for this study. Additionally, Table 17 shows that when the individual responses were analyzed, the selection related to selecting a mentor with exemplary command of content area in the subject area for which the new teacher was responsible produced a *p* value of .06. This helped to further explain the relatively high correlation value for the question as a whole.

Smith and Ingersoll (2004) were of the first, and few, researchers to conduct quantitative studies to examine the relationship between teacher induction programs and teacher retention. They concluded that induction programs have some positive influence on teacher retention rates; more specifically, this occurred when districts used mentors from the same subject field as the new teacher and those new teachers participated in collective induction programs (Smith & Ingersoll, 2004). Another study by Kang and Berliner (2012) also attempted a quantitative examination of the relationship between teacher induction programs and teacher retention rates. The researchers concluded that three induction activities showed influence on reducing the turnover rate for new teachers: extra classroom assistance, participation in seminars, and common planning time (Kang & Berliner, 2012). Additionally, the researchers determined high quality induction programs were highly structured, focused on professional learning, and collaborative (Kang & Berliner, 2012).

The teacher induction component highlighted in Question 5 (mentor selection process) underlined the importance of the mentor in the teacher induction process, as reported by Smith and Ingersoll (2004). Rural school districts typically have fewer teachers and the chance of having a mentor teacher in the same building is usually high (NCTAF, 2007). Selecting a mentor teacher in the same building, as shown in Table 17,

did not produce a *p* value supporting a significant relationship to teacher retention rate (*p* = .453). The *p* value for selecting a mentor based on exemplary command of the content area in which the new teacher was responsible was close to defining the relationship as significant (*p* = .06).

Given the fewer number of teachers per grade level in rural schools, there was an increased probability the administrator who selected a mentor with exemplary command of the same subject area as the new teacher also selected a mentor in the same building as the new teacher. This was not confirmed during the course of this study but this assumption provided a possible explanation of the results. The *p* value for Question 5 demonstrated the second highest correlational value of all the components in the study.

Another interesting result of the data from this study was found for Question 11, which asked if the district scheduled time for collaboration with peer teachers. As shown in Table 17, there was a slight negative correlation (*r* = -.218) and a *p* value of .145. This was counter to the research by both Smith and Ingersoll (2004) and Kang and Berliner (2012). The research suggested collaboration and scheduled common planning time were both positive factors for increasing teacher retention. One possible reason for this outcome could be fewer teachers in the district, resulting in a limited pool of teachers with which a new teacher has to connect.

Another possible reason is suggested by Smith and Ingersoll (2004): collective induction activities are defined as a group of new teachers sharing the same interests and goals learning as a cohort as opposed to collaboration with peers. In many of the districts in this study there was, approximately, an average of four new teachers in the cohort

group, which would limit the opportunity for new teachers to engage in activities with other new teachers sharing the same interests and goals.

Table 17

Highlights of the Results for Research Question 2: Strongest Relationships of Specific Components to Retention Rate

Correlations between Retention Rate and Specific Components of Teacher Induction Program Constructs		
	Retention Rate	*p*
Rigorous Selection	$r = .214$	.153
Scheduled Time for New Teacher Collaboration with Peer Teachers	$r = -.218$	.145

Relationship between Retention Rate and Specific Components of Teacher Induction Programs				
	Yes	No		
	Retention Rate Mean (SD)		*r*	*p*
Mentor Selection Requirements				
Three years teaching experience	64.57 (39.2) $n = 37$	58.56 (46.9) $n = 9$	.06	.693
Teaches in same building as new teacher	65.78 (40.16) $n = 36$	54.8 (42.1) $n = 10$	.113	.453
Expert command of content area	68.89 (38.4) $n = 37$	40.78 (42.6) $n = 9$	.279	.060

Note. $N = 46$. Standard deviations in parentheses.

Research question 3: What components of teacher induction programs are used in high-performing rural school districts with a 100% retention rate and describe them. Twenty of the 46 high-performing rural schools in this study had a 100%

teacher retention rate for the duration of the study. These schools were the focus of Research Question 3. A review of the data of the districts with a 100% teacher retention rate revealed positive trends regarding three components of teacher induction programs: rigorous selection process (Question 5), observation of peer teachers (Question 9), and meeting with building administrators (Question 10).

Additionally, the average teacher retention rate for the 26 districts with less than 100% teacher retention rate was 35.2%, and 11 of the 26 districts responded they did not retain any teachers from the cohort of new teachers entering the district in 2009. The teacher retention rate data for this study were based on an average of four new teachers per school in 2009, which resulted in large percentage differences due to the low numbers of new teachers entering the districts.

Survey question 5: My district outlines a rigorous selection process and is utilized when selecting mentor teachers. Seventeen of the 20 high-performing rural school districts (85%) with 100% teacher retention rate for the duration of this study selected all three of the responses provided as part of the process for selecting mentor teachers. As shown in Figure 10, of the remaining 26 districts, only 14 (42.3%) indicated that all three criteria were used when selecting mentor teachers. Responses to Question 5 exhibited the strongest relationship to teacher retention rate for this study. This illustrated the differences within the sample of high-performing rural school districts by focusing on districts with 100% teacher retention rates and what these schools did differently to select mentor teachers than those with less than 100% teacher retention rates.

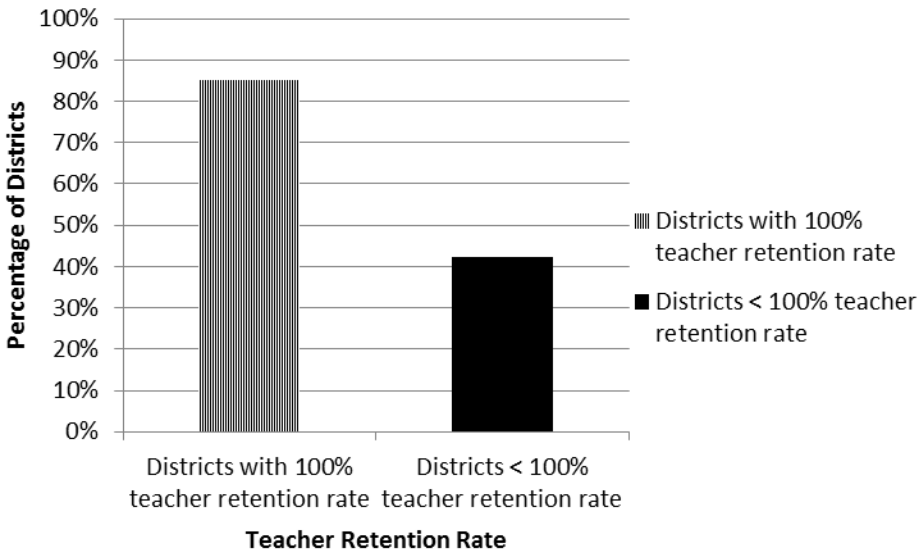

Figure 10. Bar graph comparing districts with 100% new teacher retention to districts with less than 100% retention on the basis of rigorous mentor selection. The three criteria for selecting mentors, indicated on Survey Question 5, were 1) a minimum of three years teaching in the district; 2) in the same building as the new teacher; and 3) demonstrates exemplary command of content area.

Survey question 9: My district requires new teachers to observe a peer teacher at least one class period per semester. The majority (14 of 20, or 70%) of the districts with a 100% teacher retention rate indicated they required new teachers to observe a peer teacher at least once per semester. One of the 14 school districts responded they required a new teacher to observe a peer teacher more than three times per year. As shown in Figure 11, only 11 (42%) of the districts with less than 100% teacher retention rate required new teachers to meet with their peer teachers at least once per semester. Although the data from Question 9 did not show a significant relationship with teacher retention rate in the study, the requirement of the districts with 100% teacher retention

rates for new teachers to observe peer teachers did indicate a difference in this specific area.

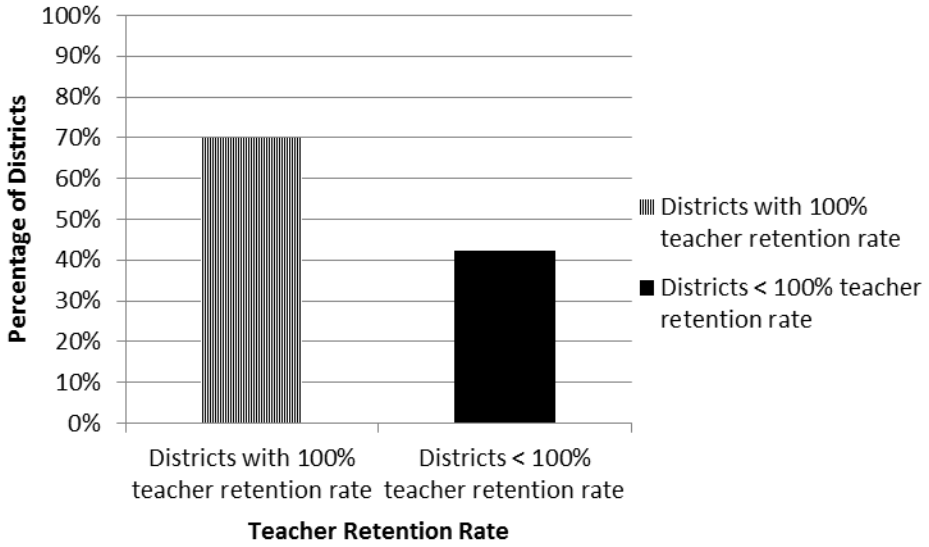

Figure 11. Bar graph comparing districts with 100% new teacher retention to districts with less than 100% retention on the basis of required peer observations.

Survey question 10: My district requires new teachers to meet with their building administrator during the school year (not including evaluations). Twelve of the 20 school districts (60%) required their building administrators to meet with new teachers at least two times per year outside of evaluations. Additionally, six of the 20 school districts with 100% teacher retention rates required administrators to meet with new teachers at least three times during the school year. As shown in Figure 12, nineteen of the 26 (73%) districts with less than 100% teacher retention rate did not require administrators to meet with new teachers during the school year outside of the evaluation process. One possible explanation is the smaller school size and fewer teachers in the

district would allow for more frequent interactions with administrators without the need for instituting a required number of meetings.

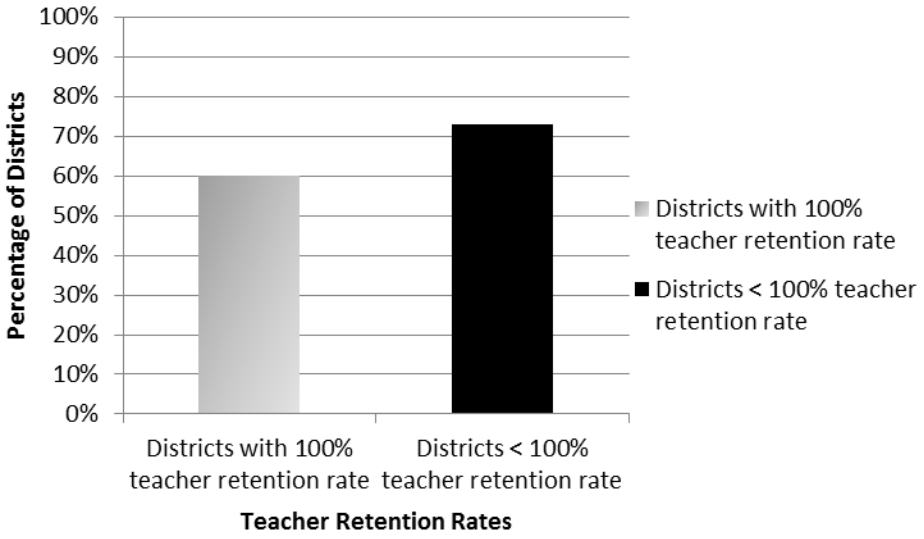

Figure 12. Bar graph comparing districts with 100% new teacher retention to districts with less than 100% retention on the basis of required new-teacher meetings with building administrators beyond yearly evaluations.

Implications for Practice

Based on the data from the study, the following implications for practice were identified for rural school districts to consider in regard to teacher induction programs and teacher retention:

1. Rural school districts should select mentor teachers for new teachers who teach at the same grade level as the new teacher or who teach the same subject as the novice teacher. The best case scenario would be a mentor teacher who satisfies this requirement and demonstrates exemplary command of the content area or subject.

2. The implementation of a diversified mentor team, or mentor teachers who specialize in specific areas needed to support new teachers, should be considered in rural school districts. This would allow rural school districts to use both the acquired instructional knowledge of the veteran teachers and knowledge of the unique characteristics of teaching in a rural setting to support novice teachers.

Recommendations for Future Research

1. A recommendation for a future study would be to focus on rural school districts with a 100% teacher retention rate for a period of time. A qualitative study of these districts, including interviews and observations, could reveal the perceptions of new teachers, mentor teachers, and administrators and aspects of induction programs specific to the unique characteristics of rural school settings.

2. Another direction for a future study would be to focus on rural schools which use a diversified mentor team or hire a full-time mentor to focus on the needs of novice teachers. A quantitative study of districts which utilize either of these approaches could reveal information about effectiveness and feasibility.

3. Additionally, a future study could involve the cost-effectiveness of the components of teacher induction programs for rural schools. A quantitative study of how much a district spends on teacher induction compared to the teacher retention rate would help guide rural school districts when making budgetary decisions regarding induction programs.

Summary

This study provided a description of the relationship between the degree of implementation of teacher induction programs and teacher retention rates in rural school districts. The scope of this study focused on high-performing rural school districts in Missouri. Rural school districts present a unique set of challenges to new teachers compared to urban and suburban districts and are often faced with limited resources to invest in implementation of a comprehensive teacher induction program (Gagnon & Mattingly, 2012).

Additionally, this study described the relationship between each specific component of teacher induction programs and teacher retention rates in rural districts. The relationship between specific components implemented in rural school districts and the teacher retention rates provided guidance for districts by determining components most strongly related to increasing teacher retention for districts facing a similar set of challenges. Also studied were the data from the survey in regards to high-performing rural school districts in the sample which maintained a 100% teacher retention rate for the duration of the study. Trends were identified related to what these districts did differently in implementing teacher induction programs from the remaining high-performing rural school districts in the study.

The analysis of the data collected revealed there was no significant relationship between the degree to which a teacher induction program was implemented and teacher retention rates in high-performing rural school districts in Missouri. Although the teacher retention rates for the school districts represented in the sample for this study averaged

63.4%, the data showed r = -.027 with p = .861; since the p value was greater than .05, the null hypothesis was not rejected.

Specific components identified for the purposes of this study, common to successful teacher induction programs, were not related to the teacher retention rates for the sample districts. Question 5, which involved information about the selection process for mentor teachers, displayed the highest positive correlation (r = .214) and a p value of .153 indicating the closest-to-significant relationship of the specific components of teacher induction programs. Question 11 involved the scheduling of collaboration time with peer teachers, and the data resulted in a negative correlation (r = -.218) and a p value of .145 which indicated the strongest relationship among the specific components. For each of the components of teacher induction programs, $p > .05$; as a result, the null hypothesis was not rejected. Therefore, there was no relationship between specific components of a teacher induction program and teacher retention rate.

The study revealed trends in three components of teacher induction programs for high-performing rural school districts with 100% teacher retention rates. First, 85% of the districts responded they selected mentor teachers based upon all three available responses, indicating a rigorous mentor selection process. Second, 70% of the districts required new teachers to observe peer teachers at least once per semester. Finally, 60% of the districts required building administrators to meet with new teachers at least two times per year.

The specific components of teacher induction programs did not statistically demonstrate a relationship to teacher retention rate; however, there were several interesting descriptive details from the data. Question 5, the district outlines a rigorous

selection process and is utilized when selecting mentor teachers, demonstrated the highest significance selected for this study in terms of correlational value. When the individual responses were analyzed for Question 5, the selection related to selecting a mentor with exemplary command of content area in the subject area for which the new teacher was responsible produced a *p* value of .06, the highest indication of near-significance of any data for this study, of a relationship to teacher retention rates. These data would support the research which suggested the selection of a mentor from the same subject field had some influence on teachers remaining in the field (Smith & Ingersoll, 2004).

Another interesting result of the data from this study was found in Question 11, which asked if the district scheduled time for collaboration with peer teachers. The data indicated a slight negative correlation (r = -.218) and a p value of .145. This was in line with the current research, which suggested a connection between opportunities for collaboration and teacher retention (Ingersoll & Strong, 2011). In many of the districts in this study there was an average of four new teachers in the cohort group. This small number of new teachers limited the opportunities for beginning teachers to interact as a cohort during the induction years.

Twenty of the 46 high-performing rural schools in this study had a 100% teacher retention rate for the duration of the study. Seventeen of the 20 (85%) high-performing rural school districts with 100% teacher retention rate for the duration of this study selected all three of the responses provided as part of the process for selecting mentor teachers. Of the remaining 26 districts, only 14 (42.3%) selected all three criteria when selecting mentor teachers. Question 5 exhibited the strongest relationship to teacher retention rate for this study. The results indicated a possible answer to the specific

differences between the schools with 100% teacher retention rates and those with less than 100% teacher retention rates in this study.

The majority (14, or 70%) of the districts with a 100% teacher retention rate indicated they required new teachers to observe a peer teacher at least once per semester. Eleven of the remaining 26 (42%) districts required new teachers to meet with their peer teachers once per semester. Although Question 9 did not show a significant relationship with teacher retention rate in the study, the requirement of the districts with 100% teacher retention rates for new teachers to observe peer teachers did indicate a difference in this specific area.

Twelve of the 20 school districts (60%) required their building administrators to meet with new teachers at least two times per year outside of evaluations. Nineteen of the 26 (73%) districts with less than 100% teacher retention rates did not require administrators to meet with new teachers during the school year outside of the evaluation process. The smaller school size and fewer teachers in the district would allow administrators to interact more frequently with teachers and eliminated the need for a required number of meetings.

In conclusion, the data in this study did not yield statistical evidence of a relationship between the degree to which a district implemented a teacher induction program with specific components and teacher retention rates. This study did provide some possible information as to what high-performing rural school districts with 100% teacher retention rates for the duration of the study did differently from the remaining high-performing rural school districts in the study. The challenges faced by rural school districts are shared by every school district across the nation; however, this study added

to the body of research for rural school districts in an effort to help guide future decisions for the sake of the students served by the district.

Appendix A

Survey Questions and Response Options

1. For the purposes of this study your district was selected as a result of MAP scores ranking in the top 10 for rural schools (650 or less students) or multiple years of Distinction in Performance during any of the school years from 2009-2013. The High-performing rural school district I am representing is:
   _____
2. How many new teachers entered your district for the 2009-2010 school year?
3. How many new teachers from the 2009-2010 cohort were still employed in your district in the 2012-2013 school year?
4. My district requires weekly contact time between mentors and new teachers.

   - Yes
     - If yes, please select from the following
       - My district also requires *5 additional hours* of support for new teachers per semester
       - My district also requires *10 additional hours* of support for new teachers per semester
       - My district also requires *20 additional hours* of support for new teachers per semester
       - My district also requires *more than 20 additional hours* of support for new teachers per semester
   - No

5. My district outlines a rigorous selection process and is utilized when selecting mentor teachers

   - Yes
     - If yes, please select ***all*** of the following which apply
       - My district selects mentor teachers who have a minimum of three years teaching in the district
       - My district selects mentor teachers who are in the same building as the new teacher
       - My district selects mentor teachers who demonstrate exemplary command of content area in the subject area the new teacher is responsible.
   - No

6. My district implements a mentor training program with ongoing professional development

    - Yes
        - If yes, then select all of the following which apply
            - My district provides professional development to enhance the knowledge of *state standards, or common core standards* for mentor teachers
            - My district provides professional development to enhance the knowledge of *formative assess*ment of new teacher performance for mentor teachers
            - My district provides professional development to enhance the knowledge of *classroom observation* for mentor teachers
            - My district provides professional development to enhance the knowledge of *reflective conversations, or cognitive coaching*, for mentor teachers
            - My district provides professional development to enhance the knowledge of *adult learning theories* for mentor teachers
    - No

7. My district has created a mentor team, specifically, a ***different*** specialist to guide and support new teachers in classroom management, curriculum specialist, lesson planning, assessment strategies, instructional techniques, student achievement data.

    - Yes
        - If yes, then select ***all*** of the following which apply
            - My district has a mentor who specializes in classroom management
            - My district has a mentor who specializes in curriculum
            - My district has a mentor who specializes in lesson planning
            - My district has a mentor who specializes in assessment strategies
            - My district has a mentor who specializes in instructional techniques
            - My district has a mentor who specializes in using student achievement data
    - No

8. My district provides an induction program for new teachers beyond the two years required of Missouri public schools.

    - Yes

- No

9. My district requires a new teacher to observe a peer teacher at least one class period per semester.

    - Yes
        - If yes, then select one of the following
            - My district requires a new teacher to observe a peer teachers classroom at least *2 times* per year
            - My district requires a new teacher to observe a peer teachers classroom at least *3 times* per year
            - My district requires a new teacher to observe a peer teachers classroom *more than 3 times* per year
    - No

10. My district requires new teachers to meet with their building administrator during the school year (not including evaluations)

    - Yes
        - If yes, then select one of the following
            - My district requires new teachers to meet with their building administrator *2 times during the year* (not including evaluations)
            - My district requires new teachers to meet with their building administrator *3 times during the year* (not including evaluations)
            - My district requires new teachers to meet with their building administrator *more than 3 times during the year* (not including evaluations)
    - No

11. My district requires scheduled time for collaboration with peer teachers

    - Yes
        - If yes, then
            - My district provides scheduled time for new teachers to collaborate *once per semester* with their peers
            - My district provides scheduled time for new teachers to collaborate *quarterly* with their peers
            - My district provides scheduled time for new teachers to collaborate *weekly* with their peers

        - My district provides scheduled time for new teachers to collaborate *daily* with their peers
- No

12. My district provides new teachers with common planning time with peer teachers.

    - Yes
        - If yes, then select one of the following
            - My district provides common planning time for new teachers and their peers *once per quarter*
            - My district provides common planning time for new teachers and their peers *once per week*
            - My district provides common planning time for new teachers and their peers *daily*
    - No

13. My district reduces the class load or modifies the teaching assignment of a new teacher for the duration of their induction period.

    - Yes
    - No

Appendix B

Letter of Informed Consent

INFORMED CONSENT FOR PARTICIPATION IN RESEARCH ACTIVITIES

"Teacher Induction Programs: How Key Components Influence Teacher Retention Rates in Rural school Districts"

Principal Investigator **Samuel Rogers**

Telephone: [redacted] E-mail: **scr429@lindenwood.edu**

Participant _____

Contact info _____

1. You are invited to participate in a research study conducted by Samuel Rogers under the guidance of Dr. Sherry DeVore (Dissertation Chair) and Dr. Trey Moeller (Dissertation Advisor). The purpose of this research is to determine the relationship between the degree of implementation of teacher induction programs and teacher retention rates in rural school districts. In addition, this study will identify specific components of teacher induction programs implemented by high-performing rural school districts in Missouri.

2. a) Your participation will involve
   - Completing a survey consisting of questions related to current teacher induction programs in your district
   - Fielding a personal phone call to discuss teacher retention data pertinent to your district

   b) The amount of time involved in your participation will be 10-15 minutes to complete the survey and 10 minutes to discuss data over the phone.
   - Approximately 46 school districts will be involved in this research.

3. There are no anticipated risks associated with this research.
4. There are no direct benefits for you participating in this study. However, your participation will contribute to the knowledge about teacher induction programs and the relationship to teacher retention rate within a district.
5. Your participation is voluntary and you may choose not to participate in this research study or to withdraw your consent at any time. You may choose not to answer any

questions that you do not want to answer. You will NOT be penalized in any way should you choose not to participate or to withdraw.

6. We will do everything we can to protect your privacy. As part of this effort, your identity will not be revealed in any publication or presentation that may result from this study and the information collected will remain in the possession of the investigator in a safe location.

7. If you have any questions or concerns regarding this study, or if any problems arise, you may call the Investigator, Samuel Rogers ([redacted]) or the Supervising Faculty, Dr. Sherry DeVore (417-881-0009). You may also ask questions of or state concerns regarding your participation to the Lindenwood Institutional Review Board (IRB) through contacting Dr. Jann Weitzel, Vice President for Academic Affairs, at 636-949-4846.

I have read this consent form and have been given the opportunity to ask questions. I may retain a copy of this consent form for my records.

I acknowledge my consent to participate in the research described above by completing the survey.

Appendix C

Cover Letter for Participation

<Date>

Dear <Title and/or name of participant>,

I am writing to request your participation in my doctoral dissertation research project at Lindenwood University. I believe the information gathered through this study will positively contribute to the body of knowledge regarding the relationship between degree of implementation of teacher induction programs and teacher retention rates in rural school districts.

The purpose of the study is to determine the relationship between teacher induction programs and teacher retention rates in rural school districts and to identify the relationship between specific elements of teacher induction programs and the retention rate in rural school districts.

Attached are an informed consent form and an electronic document survey. Your participation in this research study is voluntary, and you may withdraw at any time. Confidentiality and anonymity are assured.

If you have questions, you can reach me at [redacted] or by electronic mail at rogerss@carthage.k12.mo.us. Dr. Sherry DeVore, my dissertation advisor for this research project, may be contacted by electronic mail at sdevore@lindenwood.edu or by phone at 417-881-0009.

By completing the survey, you consent to participate in this study.

Thank you for your time,

Samuel Rogers
Doctoral Candidate
Lindenwood University

Appendix D

IRB Disposition Report

DATE:	August 28, 2013
TO:	Samuel Rogers, Ed.S
FROM:	Lindenwood University Institutional Review Board
STUDY TITLE:	Teacher Induction Programs: How Key Components Influence Teacher Retention Rates in Rural school Districts
IRB REFERENCE #:	[487487-1]
SUBMISSION TYPE:	New Project
ACTION:	APPROVED
APPROVAL DATE:	August 28, 2013
EXPIRATION DATE:	August 28, 2014
REVIEW TYPE:	Expedited Review

Thank you for your submission of New Project materials for this research project. Lindenwood University Institutional Review Board has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a study design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

This submission has received Expedited Review based on the applicable federal regulation.

Please remember that informed consent is a process beginning with a description of the study and insurance of participant understanding followed by a signed consent form. Informed consent must continue throughout the study via a dialogue between the researcher and research participant. Federal regulations require each participant receive a copy of the signed consent document.

Please note that any revision to previously approved materials must be approved by this office prior to initiation. Please use the appropriate revision forms for this procedure.

All SERIOUS and UNEXPECTED adverse events must be reported to this office. Please use the appropriate adverse event forms for this procedure. All FDA and sponsor reporting requirements should also be followed.

All NON-COMPLIANCE issues or COMPLAINTS regarding this project must be reported promptly to the IRB.

This project has been determined to be a Minimal Risk project. Based on the risks, this project requires continuing review by this committee on an annual basis. Please use the completion/amendment form for this procedure. Your documentation for continuing review must be received with sufficient time for review and continued approval before the expiration date of August 28, 2014.

Please note that all research records must be retained for a minimum of three years. If you have any questions, please contact Tameka Tammy Moore at (618) 616-7027 or tmoore@lindenwood.edu. Please include your study title and reference number in all correspondence with this office.

If you have any questions, please send them to IRB@lindenwood.edu. Please include your project title and reference number in all correspondence with this committee.

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Vita

Sam Rogers is an assistant principal at Carthage High School in Carthage, Missouri. Prior to this, he served as an elementary principal and middle school assistant principal in the Joplin School district. Sam has had the opportunity to serve as an administrator and teacher at the elementary, middle and junior high, and high school levels of education.

Sam earned a Specialist in Education in Educational Administration from Missouri State University in 2010 and a Master's degree in Educational Administration from William Woods University in 2005. In 1996, Sam completed a Bachelor of Science degree in Elementary Education from the University of Missouri.