THE IMPACT OF A TEACHER INDUCTION PROGRAM ON STUDENT

ACHIEVEMENT AND THE DEVELOPMENT OF THE FIVE STATES OF MIND

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JANELL BAGWELL

Dr. Cynthia MacGregor, Dissertation Supervisor

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The undersigned, appointed by the Dean of the Graduate School,
have examined the dissertation entitled:

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Presented by Janell R. Bagwell

A candidate for the degree of Doctor of Education

And hereby certify that in their opinion it is worthy of acceptance.

Dr. Cynthia MacGregor
Dr. William Agnew
Dr. Jason Anderson
Dr. Kim Finch
Dr. Robert Watson

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Abstract

This study was a utilization-focused evaluation designed to assist a Midwestern school district in evaluating their teacher induction program. The purpose of the study had three main facets. First was to determine if differences existed in the student achievement between teachers who had participated in the induction program and teachers who had not participated. Second, the study aimed to determine if differences were apparent in any of Cognitive Coaching's five states of mind between teachers who had and had not participated in the district's induction program. The third purpose was to explore novice teachers' perspective on their intentions to stay in the district, what keeps them there, what is attractive about other occupations or districts, and what supports they found most beneficial or would have been valuable to them.

The student achievement of 201 students was compared in reading and math. Although the means of the induction teachers was higher than the non induction teachers, no significant difference was supported in the data. Novice teachers in the district were invited to participate in the Five States of Mind Inventory-R. Eighty-five teachers chose to complete the survey. No significant difference was evident between teachers who had and had not participated in the teacher induction program for any of the five states of mind. Qualitative data collected from the survey participants were analyzed and several themes emerged regarding the perspective of novice teachers in the district.

Implications for practice included insights specifically for the district of the study and generalizable suggestions for school districts and building level administration. The recommendations for the district included the addition of supports for teachers in areas where gaps in assistance existed. Implications for school districts included maintaining

competitive salaries and reinforced the importance of focused professional development for novice teachers. The final implications were for building principals. These included the development of a supportive school environment, the facilitation of relationship building with staff, and developing personal relationships with novice teachers.

Recommendations for future research including the replication of the study after the induction program had matured and a larger population was available. Additionally, the study should be expanded to the middle school and high school arenas to provide a broader picture of the induction program's effects in the district. Finally, recommendations were to expand the study of the five states of mind to include data that is not self-reported.

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CHAPTER ONE

INTRODUCTION TO THE STUDY

Background

"Critics have long assailed teaching as an occupation that cannibalizes its young and in which the initiation of new teachers is akin to a sink or swim, trial by fire, or boot camp experience" (Ingersoll & Smith, 2004). Educators may wonder why up to 50% of American schoolteachers are leaving within their first five years of teaching, creating a revolving door in American schools (Ingersoll & Smith; Darling-Hammond, 2003). The National Commission on Teaching and America's Future metaphorically stated, "It's as if we are pouring teachers into a bucket with a fist-sized hole in the bottom" ([NCTAF], 2003, p. 21). In some districts, the teacher turnover rate was higher than the student dropout rate (Fulton, Yoon, & Lee, 2005). With all the costs to districts in replacing these fleeing teachers, it was the students above all who paid the ultimate price of high rates of teacher attrition. In order to understand this dilemma, first consideration should be given to determining if there was an adequate supply of qualified teachers.

The first conclusion may be to assume colleges were not producing enough teachers to meet the demand; however, this was not the case. It was estimated the average need for new teachers will be 200,000 by 2008 and is fueled by reduction in class sizes, increasing enrollments due to a rise in birth rates and immigration, school reform efforts requiring class-size reduction, and the increasing high number of new teachers choosing to leave the profession and not return (Algozzine, Gretes, Queen, & Cowan-Hathcock, 2007; Darling-Hammond, 2000; Stansbury & Zimmerman, 2002). The NCTAF (2003) stated there was at least three million qualified, trained teachers in the United States who

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were choosing not to teach; therefore, trying to reduce teacher attrition rates through preparing more teachers would be focusing on a symptom and not the problem.

NCTAF (2003) did recognize distribution was a factor as some regions produce more teachers than their local need and other regions were sparse in colleges graduating teachers. Not only was supply and demand unequal between the states, but it was also apparent within various fields of education. The fields of mathematics, science, special education, and bilingual education were often found lacking in qualified candidates (Ingersoll & Smith, 2004; NCTAF). If these were the only areas suffering from high rates of teacher attrition, the conclusion could be made the issue was supply and demand. However, high rates of attrition were evident across all grade levels and subject areas with staggering statistics on those who leave within their first few years of teaching.

When quality teachers leave within their first few years of teaching it represents a "premature loss of teaching talent" (Efers, Plecki, & Knapp, 2006, p. 104). This loss of talent has many long reaching effects to a school and its student population. The National Center for Education Statistics ([NCES], 2005) found a teacher makes the most gains in effectiveness over their first year and then smaller gains in the years following. NCES's research also revealed teachers with fewer than three years of experience were not as effective as those with more than three. If students were continuously faced with beginning teachers, the quality of their overall education suffered (NCTAF, 2003; Wong, 2004). Studies have recognized student achievement gains to be influenced more by who the teacher was than class size or composition (Darling-Hammond & Youngs, 2002). If districts desire to increase student achievement through reducing the trend of teachers leaving in their first years of teaching, they need to consider how to fill in the gap of

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support between heavily supported certification programs and the isolated real world classroom.

It is impossible for pre-service certification programs to fully prepare beginning teachers for the realities they will face in their first years teaching (Brooks, 2000; Darling-Hammond, 2000); therefore, districts must provide a high level of support to novice teachers if they want to retain them. Research indicated teachers with no induction program were twice as likely to leave within their first three years of teaching (NCTAF, 2003). With comprehensive induction programs, some districts had reduced teacher attrition rates to as low as two percent (Wong, 2004). However, not all induction programs were created equal. The most effective induction programs were well planned, comprehensive, systematic approaches which are long term in scope (Darling-Hammond, 2000, 2005; Fulton, Yoon, & Lee, 2005; Ingersoll & Smith, 2004; McCann, Johannessen, & Ricca, 2005; NCTAF; NRTA, 2003; Wong). Ideally, effective induction programs not only reduce the cost of teacher turnover but also strengthen teachers' instructional abilities thereby resulting in higher student achievement.

The Anderson School District (a pseudonym) found themselves facing this same national dilemma of high teacher attrition. The 25,000 student district was loosing an average of 30% of its teachers each school year. Not only did this bring financial burdens to the district, but it was also a barrier to the district's attempts to sustain professional growth and student achievement. The leadership in the Staff Development Office was concerned with this trend, set out to discover why the district was losing teachers, and made efforts to correct the problem.

Through research on best classroom practices and induction programs, the district created the Teacher 101 program to support teachers within their first five years of teaching. The Teacher 101 program was a comprehensive five-year induction program that supported new teachers through coaching, training modules, meetings for new teacher connections, and mentoring at their school. At the time of the study, the Anderson School District was in its fourth year of implementation. During the first three years of implementation, the district averaged a loss of 14%, down dramatically from the previous 30% average. This data would support the conclusion the district was retaining more of its staff; however, no research had been completed to determine if these drastic changes in the teacher induction process had resulted in an increase in student achievement. Additionally, no research had been conducted comparing Teacher 101 participants with their peers, with the same years of experience, who were not eligible for participation.

The Teacher 101 program serviced teachers who began their teaching career in the district. If a teacher came to the district after teaching elsewhere for at least a year, they did not qualify for the full program. They were invited to attend any of the teaching modules and assigned a job-alike mentor if they had not previously completed two years of mentorship. At the time of the study, the district had novice teachers who had participated in Teacher 101 and novice teachers with the same amount of teaching experience who did not had the high level of support and training provided in the Teacher 101 program. This provided the opportunity to study the effects of the program on student achievement to determine if the novice teachers who had participated in Teacher 101 were able to convert their professional learning into higher student achievement. This

situation also allowed for a comparison study of the coaching component between those participating in Teacher 101 and their peers who had not participated in Teacher 101.

Conceptual Underpinnings for the Study

The framework for the study was based on Patton's (1997) theory of Utilization Focused Evaluation. According to Patton, evaluations should be judged based on their utility and actual use; therefore, evaluators should facilitate and design the evaluation process with consideration of how what is done will affect use. A Utilization Focused Evaluation approach is not prescriptive in nature but rather a process designed to ensure the evaluator appropriately matches the methods of the evaluation to the desired outcomes of the information for the user. Patton conceived this as being "the intended use for the intended users" (Patton, p. 23).

Patton (1997) also emphasized program evaluation as being more than judging goal attainment and should involve examination of the program implementation, processes, unanticipated consequences, and long-term impacts. The initial step in the evaluation was the identification of stakeholders or the intended users. Through interactive dialogue, the evaluator established an understanding of the desires of the stakeholders in order to determine the appropriate methods to garner the information for the evaluation. Without stakeholder input, it was highly possible the evaluation would be of no use and simply left to collect dust.

For this study, the researcher first identified individuals within the Anderson School District's Professional Development Department as primary stakeholders. The Executive Director of Quality and Development and the Co-director of Staff Development were selected due to their direct involvement with the creation and

evolution of the Teacher 101 program as well as its future development. The researcher gained insights into the history and development of the induction program as well as reviewed current evaluation data on the program. Through these conversations, it was evident the Teacher 101 program had made progress towards the goal of reducing the district's attrition rate. Survey data from participants also gave insights into program elements participants viewed as valuable to their development as a teacher. However, no research had been conducted to determine if the program was having an impact on student achievement. Furthermore, research was desired to compare the impacts of the coaching model on Teacher 101 participants with peers not participating in the Teacher 101 induction program.

All of the participants of the Teacher 101 program had a coach trained in Cognitive Coaching. The leaders of the Anderson School District believed this element of their induction program to be a major contributor to the success they had experienced with increased rates of teacher retention. Cognitive Coaching was a non-judgmental approach to producing "self-directed persons with the cognitive capacity for high performance both independently and as members of a community" (Costa & Garmston, 2007, p. 9). Coaches facilitated their novice teacher's cognitive ability through the development of their five states of mind. The five states of mind are efficacy, interdependence, consciousness, craftsmanship, and flexibility. The Anderson School District was interested in determining if a difference existed in the states of mind between the group of novice teachers who participated in Teacher 101 and those novice teachers who had not participated.

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Statement of the Problem

Nationwide data indicated retention of teachers to be a crucial issue in the educational system of the United States. Not only were schools financially suffering from the high cost of teacher turnover, students were suffering academically from this revolving door of teachers in their classrooms (Darling-Hammond & Youngs, 2002; NCTAF, 2003; Wong, 2004). As Wong articulated, "the teachers hired today are the teachers for the next generation. Their success will determine the success of an entire generation of students" (p. 41). There is too much at stake to ignore what the educational system is doing, or not doing, to ensure American students have a quality education. Furthermore, Wong asserted, the field of education has failed to recognize what other industries have always known; i.e., comprehensive, sustained training makes all the difference for novice professionals.

Comprehensive induction programs have shown to make a positive impact on teacher retention (Darling-Hammond, 2000, 2005; Fulton, Yoon, & Lee, 2005; Ingersoll & Smith, 2004; McCann, Johannessen, & Ricca, 2005; NCTAF, 2003; NRTA, 2003; Wong, 2004). The Anderson School District, like many others, was suffering from a high teacher attrition rate. Their response was to create a systematic, comprehensive, five-year induction program called Teacher 101. Over the course of three years they had seen a dramatic decrease in teacher attrition. However, it was still unknown if the program was having an effect on student achievement. It was also unknown if the Teacher 101 coaching component, utilizing Cognitive Coaching, had effected participants' development of their five states of mind in comparison with new teachers not eligible to participate in the induction program.

Purpose of the Study

The purpose of the study was to assist the Anderson School District in evaluating their teacher induction program. Although the Teacher 101 program had only completed three years of implementation, it was desired to determine if there had been an impact on student achievement. The study also explored the effect of Cognitive Coaching on the development of the five states of mind between the participants in Teacher 101 and beginning teachers who were not eligible for participation.

Research Questions

Within the context of the study, the following research questions were addressed:

1. Do students, in grades three through five, of novice teachers participating in Teacher 101 achieve at higher rates than students of novice teachers who have not participated in Teacher 101 as determined by:

   a. Student's growth in reading comprehension based on a standardized reading test utilized by the district; and

   b. Student's growth in math level based on a standardized math test utilized by the district.

2. Do novice elementary teachers (grades kindergarten through five) participating in Teacher 101 report stronger levels in their five states of mind over novice teachers who have not participated in Teacher 101 as determined on the Five States of Mind Inventory -R for each of the following states:

   a. Efficacy

   b. Flexibility

   c. Interdependence

d. Consciousness

e. Craftsmanship

3. What are the current perspectives of novice elementary teachers (grades

kindergarten through five) in the Anderson School district as related to:

    a. Their intentions to stay in the Anderson School District,

    b. Why they would like to stay or leave,

    c. What supports have been beneficial in their professional growth,

       and

    d. What supports they believe would have assisted them in their

       professional growth.

Research Hypotheses

The following research hypotheses, which related to the stated research questions,

were also explored in this study:

1. Students of novice teachers, in grades three through five, participating in

Teacher 101 will have higher growth rates in reading and math over students of

novice teachers not participating in Teacher 101.

2. Novice elementary teachers (grades kindergarten through five) participating in

Teacher 101 will report stronger levels of their five states of mind over novice

teachers who have not participated in Teacher 101.

Statistical Hypotheses

The following subsequent null hypotheses are as follows:

1. The achievement of students, in grades three through five, who have novice teachers who participated in Teacher 101 is not statistically different from the students who have novice teachers who did not participate in Teacher 101.

2. The levels of the five states of mind between beginning elementary teachers (grades kindergarten through five) who have participated in Teacher 101 and those who have not participated in Teacher 101 is not statistically different.

Limitations, Assumptions, and Design Controls

Limitations and Assumptions

This quantitative quasi-experimental study was designed to evaluate a teacher induction program in the Anderson School District. As with any evaluation, there were limitations and assumptions to be considered. Because the study was limited to one Midwestern district and the unique teacher induction program they created, the results may not be generalizable to other school districts. The study was also limited to using data from teachers at the elementary level and should not be generalized to the secondary level. The remainder of this section will present the limitations and assumptions for the student achievement piece as well as the teacher perception survey.

In considering the student achievement data, the study is limited in the number of pair-matches for sampling due to the Teacher 101 program being in its fourth year of implementation. The pair-matches created were also limited in the scope of the grade levels for consideration. The student data available was limited to the district's benchmarks available at the time of the study. This limited the student data available to grades three through five. With all participants from the same district it was assumed they were working from the same curriculum and instructional timelines outlined by the

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district. Therefore, it was assumed students were exposed to the same information and had similar opportunity for growth.

To assess the five states of mind a self-reporting web survey was used. The study was limited by the use of self-reporting perceptional data from participants (Fink, 2006). Unfortunately there was not another method at this time to gauge the five states of mind. It should also be noted the participants sampled work in many buildings; therefore, the researcher was unable to control for cultural factors in the school setting that may affect the teachers' attitudes towards their work. With the use of a web-based survey collection system, computer literacy of the population was considered (Fink, 2006). Because the district and state collect data routinely from the population of the sample through web-based surveying, it was assumed the participants in the study will have an appropriate level of computer literacy to effectively participate in the survey.

Design Controls

In efforts to minimize the limitations of the study, the following design controls were taken into consideration. First, design controls for the student achievement portion of the study were shared followed by the design controls for the teacher perception survey.

In considering the student achievement data for the research, the small sample size of pair-matches were corrected through the use of student data. This allowed for approximately twenty pieces of data per teacher; therefore, increasing the sample size. The pair-matches did consider if the teacher was teaching in a Title I or non Title I school and only matched teachers with teachers in like schools. This helped control for similarities across school setting students because Title I schools were provided with

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additional supports for students in reading and math. This consideration also assisted in providing similar student populations for comparison.

Design controls were taken into consideration during the development of the teacher perception survey for the five states of mind. The survey was designed to protect the anonymity for the participants, which allowed them to answer honestly without fear of negative consequences (Fink, 2006; Gay & Airasian, 2000). Demographic data was collected at the beginning of the survey to allow the researcher to compare various similar groups of participants. The survey analyzed as a summated rating scale where answers on multiple questions were combined to obtain a single score for each concept (Johnson & Christensen, 2000). According to Johnson and Christensen, this type of measure was a necessity when measuring complex construct. The multi-item rate scale provided more reliability for the study as opposed to a single-item rating scale.

Definition of Key Terms

For the purpose of this study, the following definitions applie:

Cognitive Coaching. Cognitive Coaching was a staff development model aimed at producing "self-directed persons with the cognitive capacity for high performance both independently and as members of a community (Costa & Garmston, 2007, p. 9).

Consciousness. Consciousness was one of the five states of mind included in the Cognitive Coaching theory. The ability to monitor their own values, thoughts, behaviors, and goals was apparent in individuals with a high state of consciousness. They can articulate their well-defined value system. In the process of improvement seeking strategies, they often practice mental rehearsals and edit mental pictures (Costa & Garmston, 2007).

Craftsmanship. Craftsmanship was one of Cognitive Coaching's five states of mind. Individuals with high levels of craftsmanship strived for precision and refinement and sought perfection in their work. They strived for specificity in communications and exactness of critical thought. In addition, they held clear visions and goals (Costa & Garmston, 2007).

Efficacy. Efficacy was one of the five states of mind discussed in Cognitive Coaching theory. People with high efficacy had an internal locus of control. They engaged in cause-effect thinking, pose problems, and actively sought for problems to solve. Efficacious people were optimistic, self-actualizing, and self-modifying. They also had the ability to operationalize concepts and translate them into actions (Costa & Garmston, 2007).

Five states of mind. The five states of mind were the developmental resources human beings accessed as they resolve tensions. The five states of mind were efficacy, flexibility, consciousness, craftsmanship, and interdependence (Costa & Garmston, 2002).

Five States of Mind Inventory –R [FSMI-R]. The FSMI-R was the instrument used in the study to gauge the participants level on each of the five states of mine. The FSMI-R was adapted from Ushijima's (1996) work to develop an instrument to measure the five states of mind. Adaptations were made based on her recommendations and the need for additional information in the study.

Flexibility. Flexibility was one of the five states of mind discussed in Cognitive Coaching theory. Individuals with a high state of flexibility were empathetic and able to see through the perspectives of others. They were open and tolerant of ambiguity. They

sought novel approaches and were able to envision a range of alternative possibilities and consequences. They had a capacity to alter their thoughts as they received additional data (Costa & Garmston, 2007).

Induction. Induction lacked a clear definition and varied in meaning between school districts (Wayne, Youngs, & Fleischman, 2005; Wong, 2004). For the purpose of this study, Wong's definition of induction was utilized because of its alignment with research on effective induction programs. "Induction is a system wide, coherent, comprehensive training and support process that continues for two or three years and then seamlessly becomes part of the lifelong professional development program of the district to keep new teachers teaching and improving toward increasing their effectiveness" (Wong, p. 42).

Interdependence. Interdependence was one of the five states of mind revealed in Cognitive Coaching theory. People with a since of interdependence were altruistic and sought collegiality. They contributed to the common good and gave themselves to group goals and needs. They believed that a group as a whole was more efficient than any one individual of the group. "They value a sense of consensus and are able to hold their own values and actions in abeyance in order to contribute to the achievement of group goals" (Costa & Garmston, 2007, p. 13).

Lexile Framework. The Lexile Framework was a scaled scoring device used to rate the reading difficulty of a text. Reading assessments could assign a lexile level to a reader based on the reader's ability to comprehend the text (Lennon & Burdick, 2004). The assessment used in the study to gauge student growth in reading used a lexile measurement.

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Novice teacher. For the purposes of this study, novice teacher referred to teachers within their first five years of experience in teaching and not limited to the current district they are teaching in.

Scholastic Reading Inventory (SRI). The SRI was a "computer-adaptive assessment designed to measure how well readers read literature and expository texts of varying difficulties" (Scholastic, 1999, p. 3). This was the assessment used in the study to measure the students' academic growth in reading comprehension.

Significance. For the purpose of this study the significance level was determined at the .05 level.

STAR Math. The STAR Math was a computer-adaptive assessment to monitor student's progress of general math achievements (Renaissance, 2006). This was the assessment used in the study to measure the student's mathematical growth.

Teacher 101. Teacher 101 was the five-year teacher induction program created by the Anderson School District, a pseudonym, and was the program evaluated in the study. The comprehensive program included the following required components: an induction week, a job alike mentor, teacher connection meetings, modules designed around the needs of novice teachers, and an instructional coach trained in Cognitive Coaching.

<div align="center">*Summary*</div>

Teacher attrition of some school districts in the United States had risen to 50% of its teachers leaving within their first five years of teaching. School districts were then faced with the economic effects of hiring and training new staff continuously. Additionally, students' academic learning was negatively affected when they experienced a string of novice teachers. The rate of teacher attrition combined with the projections for

additional teaching positions created a desperate outlook for schools in providing quality teachers and instruction for their students. School districts looking to correct this issue began to develop induction programs in hopes of supporting their new teachers in their growth and learning in hopes to sustain them in the field of education.

The Anderson School District was better than the national average with a teacher attrition rate of thirty percent. Through the development and implementation of a five-year induction program, Teacher 101, the district had seen a reduction in their attrition rate to a three-year average of fourteen percent. However, no research had been conducted to determine if the program has had an effect on student achievement. Although participants had been surveyed on program components, no research existed comparing the differences between the group of teachers who participate in Teacher 101 and those who were not eligible for participation. The purpose of this study was to determine if the induction program was effecting student achievement, and to compare the states of mind of novice teachers who had participated and those who had not participated in Teacher 101.

The remainder of this study is divided into four chapters. Chapter two contains a literature review on teacher retention, research on induction programs, a summary of Cognitive Coaching and the five states of mind. A more detailed description is provided of Anderson School District's Teacher 101 program. Methods for the study are outlined in chapter three followed by the data analysis in chapter four. Chapter five includes a discussion of the findings and implications for future research.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

Introduction

In the era of school accountability and reform, there are many pressures placed upon schools across the country. *No Child Left Behind* has highlighted the need to improve student achievement and narrow the gaps in achievement between segments of society. In efforts to create optimal classrooms for American students, educational leaders cannot overlook the pivotal centerpiece of all classrooms, the teacher. In order for schools to begin to address the needs of their students, they must first address the needs of the organization not only through hiring of outstanding candidates but finding ways to retain the quality teachers already within the system and facilitate their potential. As Fiore and Whitaker (2005, p. 8) stated, "If we understand this fundamental concept – that the quality of the people will ultimately determine the quality of the organization - then we must also recognize the converse. The fastest way for a school to decline is to lose its best teachers."

At first glance, it may appear there was simply a shortage of teachers available and the solution was to prepare and recruit more educators into the field. To the contrary, the National Commission on Teaching and America's Future ([NCTAF], 2003) found as a nation the United States graduated more than enough new teachers to meet the need in American schools and there were over three million qualified teachers not currently teaching. The root of the problem was found in retaining teachers within their first few years in the profession. Research has shown that a third of teachers leave within their first three years of teaching and almost half leave by the end of their fifth year (Darling-

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Hammond, 2003; Fulton, Yoon, & Lee, 2005; Ingersoll & Smith, 2004; NCTAF). The urgency to address teacher retention was magnified with projections of teacher vacancies reaching an increase of 17% by 2015 due to rising immigration rates, increasing retirements, growing birth rates, and pressures to reduce class-size (Algozzine, Gretes, Queen, & Cowan-Hathcock, 2007; Darling-Hammond; Fiore & Whitaker, 2005; National Center for Educational Statistics [NCES], 2005; Stansbury & Zimmerman, 2002).

The cost of high turnover rates was hard to ignore for educational leaders. Districts must pour money year after year in efforts to recruit, hire, and train new teachers, only to have them leave prior to reaping the benefits of the higher student achievement they were hoping for (Barns, Crowe, & Schafer, 2007; Ingersoll & Smith, 2004; NCTAF, 2003). The state of Texas reported teacher turnover costs, for their state alone, estimated at a conservative $329 million dollars a year (NCTAF). Chicago public schools estimated loosing $17,872 per teacher who left (Barns, Crowe, & Schafer). Overall, it was estimated American schools lose $2.6 billon dollars a year to teacher attrition (Fulton, Yoon, & Lee, 2005). Besides the financial strain, high teacher turnover undercuts school reform efforts because schools are "robbed of the ability to build the all-important capacity to sustain school improvement when teachers depart before reforms can become established practice" (NCTAF, p. 33). Ultimately it was the students who were negatively impacted the most when a school had a high turnover rate. Research indicated that, generally, beginning teachers with three or fewer years were not as effective as teachers with more experience (Darling-Hammond, 2003; Efers, Plecki, & Knapp, 2006; NCES, 2005; Wong, 2004). Therefore, when students had beginning

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teachers throughout their school career their level of achievement is far below those who

had not experienced the same turnover (NCTAF; Wong).

Unfortunately, it was the students who experience the effects of teacher turnover

who were the most at-risk. Teacher turnover was 50% higher in high-poverty schools

over their low-poverty counterparts (Darling-Hammond, 2003). Ingersoll and Smith

(2004) found new teachers in high-poverty public schools were more likely than their

counterparts to leave the profession. Barnes, Crowe, and Schaefer (2007) found a

correlation between high teacher turnover and low school performance and high poverty.

The students in these schools were not only affected by a higher rate of teacher turnover,

they also had the most to lose. The impact of elevated turnover in high-poverty and high-

minority schools created a no-win situation for these students because of their need for

stability (Fulton, Yoon, & Lee, 2005; NCTAF, 2003). When the school stability was

eroded by teacher turnover, students suffered the consequences, not only academically,

but emotionally and socially as well. How can the United States afford to not attempt to

address this growing problem? All of its children deserve better.

The remainder of this chapter is dedicated to exploring the question of why

teachers are leaving and what educational leaders can do to combat the rising trend. First,

research is explored to illuminate the root causes behind teacher attrition and the

converse of why teachers stay. Next, literature is discussed regarding the needs of

beginning teachers and induction programs. Following that information an explanation is

provided of the teacher induction program of Anderson School District including a look

at its history and foundational philosophies. Finally, Cognitive Coaching and its five

states of mind is defined and integrated with research on its effects on teaching.

Why are Teachers Leaving?

There was an increasing number of teachers in the United States who were leaving the profession, for non-retirement reasons, and never returning. Although some may have left for reasons beyond a leader's control, such as family growth or relocation, there were more pressing reasons within control of educational leaders which explained the majority of teacher attrition (Fiore, & Whitaker, 2005; NCTAF, 2003). Uncovering the reasons why qualified teachers were leaving was the first step to treating the problem and applying more than a band-aid to the symptoms. The following discussion provides insights from recent research in regards to why teachers were choosing to leave teaching. First, the impact of teacher preparation and hiring processes are reviewed. Then the concept of teachers being overwhelmed is discussed followed by teacher isolation. Finally, the school's culture and working conditions are reviewed as determinants for novice teachers to stay or leave.

Teacher preparation programs. There were two factors affecting teacher attrition that occurred before teachers begin teaching, namely, teacher preparation programs and hiring processes. Teacher preparation programs vary between institutions and states. In the quest to understand why teachers were leaving, reviewing their preparation programs was a logical place to begin. The NCTAF (2003) found teacher preparation to be one of the three root causes for decreasing teacher retention. Darling-Hammond (2003) found the more training prospective teachers receive, the more likely they were to stay in the profession. Her research also revealed that 60% of teachers who gained certification through alternative certification programs left within their first three years of teaching compared to 30% of teachers who graduated from traditional preparation programs

(Darling-Hammond, 2000). Addressing teacher education programs may address part of the problem; however, educational leaders need to be cognizant that "even the best of these input approaches will do little to stop the revolving door of teacher attrition unless they are backed by policies and programs that provide professional support for teachers – especially new teachers" (NCTAF, p. 121).

Hiring process. The next instance where teachers made the decision to leave teaching, or go to another district, was in the hiring process. Cumbersome application processes, inadequate customer service, and layers of bureaucracy were discouraging to those who could not wait for the security of a job (Fiore & Whitaker, 2005; Levin & Quinn, 2003; NCTAF, 2003). When districts made late budget decisions, schools were often forced to hire from a mediocre pool of candidates. In their research on staffing urban classrooms, Levin and Quinn found between 31% and 60% of the applicants in urban districts withdrew from the process to accept positions with districts that made offers earlier. Almost half of these candidates indicated they definitely or probably would have accepted an offer from the urban district if it had come earlier.

Besides poor design and execution of human resource departments, Levin and Quinn also revealed three policies that support hiring failures. The first was vacancy notification requirements that allowed for late notice of teachers leaving. The second policy barrier included teachers unions or board policy transfer requirements that pushed back the timelines for the opportunity of new teachers to the district to be hired. The third problematic policy was late budget timetables and inadequate forecasting of needs, which was tied back to the states' fiscal years ending in June. Not only have district policies effected the hiring processes, but state policies complicated the process as well.

Experienced teachers, who move between states, frustrated with lack of pension portability and loss of salary credits, would often search for employment within other fields (NCTAF).

First years teaching. After they begin teaching, research on teacher attrition has revealed aspects of support, school culture, and working conditions as reasons for teachers leaving during their first few years of teaching (Efers, Plecki, & Knapp, 2006; Firore & Whitaker, 2005; Fulton, Yoon, & Lee, 2005; NCTAF, 2003). Efers, Plecki, and Knapp warned that high teacher attrition rates could be a sign of other issues within a school or district and encouraged districts and schools to review and study their population to determine causes and solutions to account for the factors within their specific situation.

Teachers being overwhelmed. A common reaction of new teachers was the feeling of being overwhelmed (Darling-Hammond, 2003; McCann, Johannessen, & Ricca, 2005; Protheroe, 2006). Over the years, the list of requirements and expectations placed on new teachers, has grown immensely (Stansbury & Zimmerman, 2002). The high-stress factors included long hours, lack of resources, high stakes testing, assignment of extra duties, in addition to the other concerns discussed later in this section (Efers, Plecki, & Knapp, 2006; McCann, Johannessen, & Ricca; National Retired Teachers Association, & Harris Interactive [NRTA], 2003). Protheroe ascertained limitations of new teachers that contributed to the sense of feeling overwhelmed. Difficulty reading the classroom environment, establishing routines, tailoring instruction to meet individual needs, lacking confidence and focus, and trouble analyzing and reflecting on their own teaching contributed to the overwhelming feelings during an individual's first years of teaching.

Also, new teachers were often assigned to teach in subject areas they do not feel

confident or prepared to teach (McCann, Johannessen & Ricca, 2005). Without

appropriate levels of support, many new teachers leave teaching because of the

overwhelming nature of the work and the pain of failing in the classroom (NCTAF,

2003).

Teacher isolation. Isolation was another factor, compounding the sense of being

overwhelmed, which contributed to teacher attrition during the first years of teaching.

The lack of cultivating relationships with students, parents, colleagues, and

administrators was a common concern among teachers who left teaching in their first

years (Darling-Hammond, 2003; Efers, Plecki, & Knapp, 2006; Fiore & Whitaker, 2005;

McCann, Johannessen, & Ricca, 2005; NRTA, 2003; Protheroe, 2006). In their study of

beginning teachers who left and who stayed, the NRTA found that both groups indicated

dealing with the politics and culture of the school system was challenging and isolation

was taxing when they did not have someone with whom to vent frustrations or brainstorm

problems.

Teachers who left also indicated they lacked strong support for dealing with and

understanding how to get things done and felt that a multi-faceted support system would

have impacted their decision to stay or leave. Fiore and Whitaker (2005) stated isolation

was common in the first years of teaching because new teachers were coming from

heavily supported programs with caring, cooperating teachers for student teaching and

supportive university supervisors where continuous contact was a requirement. The

researchers indicated this isolation could only be overcome through opportunities of

continuous dialogue with colleagues in a culture of support throughout the first years of teaching.

School culture. A school's culture was an additional factor found to be contributing to the teacher attrition dilemma. Lack of community within a school can not only stunt school growth, but also can create a vicious cycle of teacher turnover, resulting in staff not understanding where they are as a school and where they need to go (Efers, Plecki, & Knapp, 2006; Fiore & Whitaker, 2005; Ingersoll & Smith, 2004). The NRTA (2003) found the impact of colleagues with a negative attitude contributed to teachers leaving the profession in addition to unsupportive and unmotivated colleagues.

School cultures that supported weak relationships and did not encourage strong personal connections were more likely to facilitate higher levels of teacher attrition (Fiore & Whitaker, 2005; NRTA, 2003). Literature also highlighted the significance of a strong relationship between novice teachers and administrators (Efers, Plecki & Knapp 2006; Fiore & Whitaker; NRTA; Protheroe, 2006). When novice teachers did not feel support from their administrators in dealing with discipline, parents, or in handling everyday operations, they were more likely to leave teaching or move to another school (Efers, Plecki & Knapp; NRTA).

Working conditions. Literature also indicated that working conditions within the school were a contributing factor for low levels of teacher retention within American schools (Efers, Plecki, & Knapp, 2006; McCann, Johannessen, & Ricca, 2005; NRTA, 2003). Heavy work loads resulted from undesirable schedules, extracurricular responsibilities, mandates of participation in school activities, and requirements of high stakes testing added to an already stressful life of novice teachers and increased their

chance of leaving early in their careers (McCann, Johannessen, & Ricca; NRTA).

Teachers who left expressed an overall frustration for the school situation and the

conditions in which they were expected to teach. Conversely, teachers who stayed

through their novice years had a positive perspective on their school situation (NRTA).

In conclusion, the literature on teacher retention has illuminated various reasons

novice teachers gave for leaving within their first years in the teaching profession. First,

the gap between teacher preparation programs and the needs of beginning teachers was

discussed. Then the consequences of belabored and poorly timed hiring processes and

practices explained how districts lost highly qualified teachers before they began

teaching. After they were hired, beginning teachers often faced feelings of being

overwhelmed and isolated, which contributed to their decision to leave teaching. Finally,

a school's culture and the working conditions were explored as contributors to the teacher

retention problem. The next section is an examination of what literature has described as

reasons teachers stay in the profession.

<p align="center">*Why do Teachers Stay in Education?*</p>

Not only had research discovered why teachers leave the field of teaching, but

there was also a body of literature that explored why teachers stayed in education. Some

reasons for staying included a stable teaching assignment, school location, personal

considerations, and the cost of living (Efers, Plecki, & Knapp, 2006; Fiore & Whitaker,

2005; NRTA, 2003). These factors are mainly considered beyond the influence of school

administration. However, research has illuminated areas, which related to the retention of

teachers, which were within the school's power to influence. The following paragraphs

<p align="center">25</p>

will discuss the impact of relationships, professional development support, and school culture on keeping teachers in the field of education.

Relationships. The literature revealed when individuals feel a strong connection to their colleagues in their school they are more likely to not only remain at their schools but also become vital contributing members of the school community (Birkeland & Johnson, 2002; Johnson & Birkeland, 2003; NCTAF, 2003; Nielsen, Barry, & Addison, 2002; NRTA, 2003; Sargent, 2003; Williams, 2003). NRTA's research revealed these strong personal connections needed to be part of a formal support system for dealing with barriers and daily challenges if they were going to influence the decision to stay in the profession. Sargent indicated new teachers needed these connections to their colleagues in order to meet their emotional needs. In her study of why urban teachers stayed in the profession, Nieto (2003) revealed having colleagues to whom they could turn to for support, or just to talk to, was a necessary contributor to staying in education. Additionally, Williams found job satisfaction intertwined with satisfying relationships, but he also noted half the participants indicated these essential relationships were often hard work to maintain over time.

Professional development support. The literature repeatedly indicated even the most thorough certification programs could not prepare teachers for the realities of their first years of teaching; therefore, districts which included professional development support were more likely to retain their staff and create more effective teachers (Darling-Hammond, 2000; Fieman-Nemser, 2003; NRTA, 2003; Renard, 2003; Sargent, 2003; Stansbury & Zimmerman, 2002; Wayne, Youngs, & Fleischman, 2005; Wong, 2004). Renard asserted new teachers need additional time and support to develop into reflective

teachers able to learn from mistakes and successes. Efers, Plecki, and Knapp (2006) found those who stayed indicated the collegial community of their school influenced their choice to stay at their school. In their research of new teachers in Massachusetts, Johnson and Birkehland (2003) revealed new teachers were looking for schools where they could feel like professionals through sharing of resources and learning with colleagues to hone their skills. Participants in their study also indicated they were looking for schools with faculty-wide commitment to long-term growth and learning.

School culture. School culture was also found to be a contributing factor in retaining teachers (Firore & Whitaker, 2005; Johnson & Birkeland, 2003; Nieto, 2003; Williams, 2003). Johnson and Birkeland discovered when new teachers found their school environment to be unsupportive, non-collaborative, or chaotic they were more likely to look for a job in another school or career field. Firore and Whitaker asserted a culture of support that included strong collaboration and teacher decision-making correlated with higher morale and commitment to teaching. They also contended it was through enhancing the school culture where administrators can make the greatest impact on teaching. Nieto affirmed from her work on urban teachers, schools with cultures allowing for "intellectual work" (p. 17), where faculties were constantly updating their craft and knowledge, sustained teachers in the profession.

There were many aspects factored into the decision of a teacher to leave or stay with the profession. Some of those factors were within the realm of influence of school leaders; others were not. This section focused on three contributing factors that influenced teachers to stay in the field of education. Relationships with colleagues, ongoing professional development, and a supportive school culture were substantiated

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with research as determinates for beginning teachers to stay in their current teaching position. The next section will review the literature on how school leaders can impact teacher attrition rates through interventions with beginning teachers.

Fixing the Problem of Teacher Attrition

Experts in the field of education have offered many suggestions for districts and building leaders as solutions to the dilemma of teacher attrition. As districts have faced the costs for high rates of teacher attrition, some have made efforts to address the problem through development and implementation of teacher induction programs. First, this section reviews the advice found in the literature for what districts and states can do to increase their teacher retention rates. Then school cultures, which promote teacher retention, is discussed. Finally, research on induction programs is shared along with the components of the programs found to be most effective.

District and state level efforts. Researchers and educational experts both agreed there were steps districts and states could take to work towards increasing teacher retention. Teacher salaries were often in the spotlight for budgeting dilemmas and voting initiatives, subsequently it is not surprising that a low salary was the reason some teachers gave for leaving the profession (Efers, Plecki, & Knapp, 2006; Ingersoll & Smith, 2003; NRTA, 2003). In her proposal for what districts and states could do to address teacher attrition, Darling-Hammond (2000) suggested the need for teacher salaries to be equalized, where there are established minimum salary baselines with the state supplementing poorer districts' budgets. Not only would this increase the competitiveness with other fields, it would level the playing field between districts. Another proposition called for states to come together to create reciprocity across state

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lines to accept teacher certifications from other states or National Board Certification in efforts to make it easier for qualified teachers who move to different states to continue in the profession (Darling-Hammond; Levin & Quinn, 2003). Furthermore, there was encouragement for state legislatures to approve and fund mandatory induction programs as currently 33 states have policies but only 17 require and fully fund mandated induction programs for all teachers (Fulton, Yoon, & Lee, 2005; NCTAF, 2003). It is believed these initiatives would positively affect teacher retention; however, they are long-term visions, which were out of the local control of educational leaders, and would not address the primary reasons found for teachers leaving.

Hiring practices and policies. The first step in combating the teacher attrition rate was found in the hiring practices and policies of school districts. Darling-Hammond (2000) and Fiore and Whitaker (2005) both stressed the importance of hiring decisions. Darling-Hammond indicted school districts needed to refuse to hire unqualified teachers. She indicated financial strains, cumbersome hiring process, and patronage candidates all were contributors to not hiring the best candidates for open positions. In support of this argument, Fiore and Whitaker asserted many educational leaders tend to settle for available employees instead of working to find the best due to emotional pulls or known quantities. They emphasized the necessity to recognize the standards for teachers have changed; therefore, the hiring expectations should change to meet the demand. Ganser (2002, p. 32) endorsed this argument and indicated, "the line between teacher preparation and teacher support can be unclear, and the decision to hire a weak or poorly prepared teacher just because a mentoring program exists can soon backfire." In order to overcome the hiring dilemma, districts need to review hiring policies and begin to build

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relationships with local universities to gain invaluable insight into who their outstanding recruits are (Darling-Hammond). Finally, as Fiore and Whitaker stated, leaders need to hire people who are not only a good fit for their organization, but who are better than themselves.

School culture. The research pointed to negative aspects of school cultures as factors in deciding to leave a school (Firore & Whitaker, 2005; Johnson & Birkeland, 2003; Nieto, 2003; Williams, 2003). Garmston (2001) advised administrators could assist beginning teachers through promotion of a professional culture and asserted the efforts of both the individual and the school, as a whole, will be enhanced when new teachers' programs contribute to a culture of learning. He listed five contributing elements: shared norms and values, collective focus on student learning, collaboration, less isolated practice, and reflective dialogue (p. 55).

In support of building a strong culture, Fiore and Whitaker described ten ways school administrators could enhance their school culture for productivity. The list began by emphasizing administrators being visible to all stakeholders. Through being visible administrators can convey comfort and support plus be more aware of the various aspects of their school systems. Fiore and Whitaker also placed importance on communicating regularly and remembering that principals are role models. Additionally, being positive, passionate, organized, and taking pride in the school are characteristics Fiore and Whitaker found in principals with positive school cultures. Fiore and Whitaker also discovered positive school cultures incorporated principals who cultivated and empowered teacher leadership. Ganser (2002, p. 30) advised leadership is to solicit input

from several stakeholders in development of induction programs, "knowing it takes an entire school community to induct a new teacher."

Induction programs. Throughout the literature on teacher retention were studies on induction programs and the effectiveness of their various components. Barnes, Crowe, and Schaefer (2007) asserted if districts spend money to develop quality teacher induction programs, they could reduce the rate of teacher turnover and save millions of dollars lost with high rates of attrition. There are many forms of induction programs, each with their own purposes, differing in duration and intensity, with the most dominant form being mentoring (Ingersoll & Smith, 2004; NCTAF, 2003; Wong 2004). The most effective induction programs were well-planned, comprehensive, systematic approaches, which were long term in scope (Darling-Hammond, 2000, 2005; Fulton, Yoon, & Lee, 2005; Ingersoll & Smith; McCann, Johannessen, & Ricca, 2005; NCTAF; NRTA, 2003; Wong). In order to review these approaches, the following information will highlight specific components of successful induction programs and how they are to be effectively implemented. First, mentor programs and establishing support systems is discussed. Following is a review of the professional development needs of new teachers and areas of focus for induction programs.

Mentors. Mentors have been widely used in many fields to assist new employees in being acculturated to their new positions. It is important to note that mentoring was not synonymous with induction (Wong, 2004). Mentoring was one component of what was considered a comprehensive induction program. Research has shown that mentors can be effective in maintaining teachers early in their careers and reducing attrition rates by up to two-thirds (Darling-Hammond, 2000 & 2003; Ingersoll & Smith, 2004; NCTAF, 2003;

NRTA, 2003; Sargent, 2003). Those who left teaching indicated an effective mentoring program would have helped them cope with the strains of teaching although mentoring alone would not have changed their decision to leave (NRTA). Mentoring programs, however, were only as good as the mentors themselves (Fiore & Whitaker, 2005; Ganser, 2002). "It is better for a school to have no mentoring program at all than to have a bad mentoring program" (McCann, Johannessen, & Ricca, 2005, p. 32). Effective mentoring programs began through careful selection of mentors and providing purposeful training to them on their responsibilities (Darling-Hammond, 2003; Fiore & Whitaker; McCann, Johannessen, & Ricca; Wayne, Youngs, & Fleischman, 2005).

Ganser warned against the *one size fits all* programs and emphasized induction strategies must take into account the varying needs of new teachers. Administrators should also be cognizant to not create mentoring programs that operate solely as buddies or cheerleaders, but programs that are focused on effective practice (Stansbury & Zimmerman, 2002). Literature also emphasized successful mentor relationships occurred through regular meetings to discuss a variety of topics based on the mentee's needs and oftentimes to simply vent frustrations (Fiore & Whitaker, 2005; McCann, Johannessen, & Ricca, 2005; Sargent, 2003). Protheroe (2006) suggested the need for principals to be prepared to fill this gap if a mentor is not available or the one provided is proving to be ineffective. Ganser asserted good mentoring programs included procedures for dissolving mentor/mentee relationships that are not working while maintaining the dignity of all parties involved. Although mentoring can be an effective tool in retaining teachers, it should only be viewed as one component of a comprehensive induction program

(Darling-Hammond; Efers, Plecki, & Knapp, 2006; Fiore & Whitaker; Fulton, Yoon, & Lee, 2005; Wong, 2004).

Support systems. Throughout the literature, an importance of establishing support systems for new teachers was evident. Support systems described encompassed meeting the emotional and psychosocial needs of novice teachers as well as their intellectual needs for growth in their profession (Fiore & Whitaker, 2005; Griffin, Wohlstetter, & Bjaradwaja, 2001; NRTA, 2003). Furthermore, new teachers needed support from administrators and fellow teachers to cope with the daily routines, lesson planning, and disciplinary situations which come in the course of a year (Fulton, Yoon, & Lee, 2005; McCann, Johannessen, & Ricca, 2005; Protherore, 2006). A variety of methods were provided for building the foundation for these supports including aligned professional development opportunities, meetings set aside for support opportunities, and social gatherings (Darling-Hammond, 2000; Fiore & Whitaker; Fulton, Yoon, & Lee; NRTA; Protheroe). Research has also established a network of external supports to be effective in supporting new teachers (Ingersoll & Smith, 2004). Technology was found to be an asset through the establishment of online forums, journals, and resources that added to the foundational support necessary for survival in the educational field (Fulton, Yoon, & Lee; Ganser, 2002; NRTA).

Meeting the needs of novice teachers. Having an induction program would not be enough to retain and develop effective teachers unless it is designed to meet the needs of novice teachers. "We misrepresent the process of learning to teach when we consider new teachers as finished products, when we assume they mostly need to refine existing skills, or when we treat their learning needs as signs of deficiency" (Feiman-Nemser, 2003, p.

26). Besides orientation on routines and building practices, induction topics should include strategies on helping new teachers anticipate difficult times and recognize that frustration and fatigue are normal and not a sign of incompetence (McCann, Johannessen, & Ricca, 2005; NRTA, 2003).

Long-term induction programs allowed districts to space out learning and not overwhelm new hires in the whirlwind prior to the first day of school. In their research on induction programs, Algozzine, Gretes, Queen, and Cowan-Hathcock (2007) discovered the most valuable induction activities, according to novice teachers, were those that focused on specific aspects of teaching over global overviews. In support, Nielsen, Barry, and Addison's (2006) research proved novice teachers valued professional development in areas that helped them meet their greatest challenges such as classroom management. Topics for professional development found to be most needed by new teachers included classroom management, curriculum management, time management, effective instructional methods, and training on how to handle difficult and medical situations (Griffin, Wohlstetter, & Bharadwaja, 2001; NRTA).

The review of literature highlighted the research on methods to address the rising rates of teacher attrition. Examining state and district policies revealed there are funding, hiring, and certification issues which affected teacher retention. Solutions were shared pertaining to strategies districts could take along with efforts requiring coordinated efforts at state and national levels. The literature explored how comprehensive induction programs have shown to decrease the attrition rates for districts. The components of mentoring, a support system, and professional development topics were also explored more closely. The remainder of the chapter will be dedicated to looking closely at how

one district developed their teacher induction program in efforts to address the need in their district and Cognitive Coaching theory.

Teacher 101 – One District's Solution

The Anderson School District, like many others across the United States, found themselves losing over 30% of their teaching staff each year. This was a concern to district leaders including those overseeing the district's professional development efforts. After defining the problem and gathering baseline data, they set a course to study other induction programs and created one to meet the district's needs. The Teacher 101 program was first implemented in the fall of 2004 for all new teachers to the district who had not completed one full year of teaching experience. At the completion of their third year of implementation, the district's three-year average of teacher attrition was 14%. The following paragraphs contain information regarding the Teacher 101 program. First, the program is described through its mission and goals. Then the components of the program are described. Finally, the data collected from the participants are shared.

Mission and goals. The mission of the Teacher 101 program was to "provide an exemplary teacher for every student in the Anderson School District." The program vision detailed the expectations for early career teachers in the district and included leading classrooms where students were well managed, highly engaged, and performing at or above grade level. Teachers should utilize research based instructional strategies. Data driven decision making should direct instruction and allow for interventions and differentiation to meet the unique needs of students. The vision also included the desire for beginning teachers to demonstrate professionalism, the ability to build positive

relationships, and develop into systems thinkers who engage in a plan, do, study, act processes routinely.

There were five goals of the Teacher 101 program. The first goal aligned directly with the district's improvement plans and was to increase student achievement and improve the graduation rate. Second, was to develop a common knowledge among teachers about research-supported instructional practices. Building upon this goal was the third goal of increasing the implementation of research-supported instructional practices. The fourth goal was to assimilate teachers into the Anderson School District learning community. The final goal was to retain exemplary teachers. In efforts to meet the goals and obtain the vision, a comprehensive program was developed.

Program components. The five year program involved more than the previous mentoring model and was required by all teachers hired to the district who had not completed a full year of classroom teaching experience. The building administrator assigned a job alike mentor to all new teachers. In addition, each first year teacher was assigned a coach trained in Cognitive Coaching. In the first year, coaches connected weekly with their new teacher and the number of contacts tapered off through the end of the five years. The coach's role was not that of an evaluator but rather another level of support provided beyond what was physically possible by a mentor or building administrator.

All new teachers were required to attend a comprehensive induction week in August that included a district orientation, building orientation with administrators, and a demonstration classroom. New teachers were also required to attend new teacher connection meetings, which allowed them to network and socialize with other new

teachers across the district. The final component was a series of modules strategically planned and designed to develop teachers in their skills and growth throughout their first five years of teaching.

The new learning was scaffold throughout the five years. In year one, Teacher 101 participants were supported in classroom management and lesson design. In year two, they were supported in instructional strategies. Finally, in years three through five their learning centered around differentiated instruction and Continuous Classroom Improvement. Teacher 101 participants were routinely asked to explicitly reflect on the learning experiences they had in training modules which provided the district with additional insight into the perspective and needs of novice teachers in their district.

Program data. Stakeholders of the program were routinely asked for their perceptions and feedback regarding the Teacher 101 program. Participants in the Teacher 101 program were asked for feedback throughout the year in addition to a final end of the year reflection survey. One question in the survey asked participants to rate the benefit they found for each component of the program. A compilation of these surveys showed 89.9% of the participants found the coaching component to have "benefited" or "significantly benefited" them. Conversely, the mentoring relationship was one of the lowest having 67.8% who felt they had benefited from that component. A survey of building principals was favorable on all questions with 100% indicated they "agreed" or "strongly agreed" the program provided new teachers with ongoing support, assisted with developing classroom management skills, and increased student engagement. Observational data from coaches reported an increase, over the course of the year, in the use of effective strategies being observed in the classroom.

This section provided brief details about the Teacher 101 induction program. The mission and vision were shared with a description of the programs components. Data were shared from the perspective of the participants, building principals, and the coaches regarding the benefit of the program and the support it has provided for teachers. One gap in the data were to determine if the program has had any effect on student achievement. The following section explores the foundational structure of the coaching component for Teacher 101, Cognitive Coaching.

Cognitive Coaching

Costa and Garmston (2002) developed the Cognitive Coaching model for staff development in 1984 with the mission of producing "self-directed persons with the cognitive capacity for high performance both independently and as members of a community" (p. 16). Their theory was a modern extension of Cogan's Clinical Supervision phases with an integration of constructivist theories, neuolinguistics, humanistic psychology, and cognition theories (Costa & Garmston, 2007). The model focused on enhancing trust, learning, and autonomy of teachers (Moche, 2001). As with any theory, the effectiveness of the model depended on the coach's implementation of the coaching cycle and their ability to work with others (Brooks, 2000; Costa & Garmston, 2007). The following paragraphs define the role of a coach and examine the importance of reflection and trust. Then the differences between coaching and mentoring are explored followed by a review of the research on Cognitive Coaching. Next a discussion of reflective practices is followed by an in-depth look at the five states of mind.

Role of the coach. The role of a Cognitive Coach was to take a nonjudgmental stance to "help another person to take action towards his or her goals while

simultaneously helping that person to develop expertise in planning, reflecting, problem solving and decision making" (Costa & Garmston, 2002, p. 13). One might assume the metaphor of a sports coach who guides and directs growth in others was an accurate image of the model, conversely, cognitive coaches were to consider themselves as a stagecoach with the goal "to convey a valued person from where he or she is to where he or she wants to be" (Costa & Garmston, 2007, p. 6). Moreover, the coach did not work within their personal agenda but guided the coachee towards success of what he or she would like to accomplish. Coaches took their teachers through a three-phased cycle, which included a preconference, a classroom observation, and a reflective conversation (Brooks, 2000; Costa & Garmston; Moche, 2001).

To successfully utilize Cognitive Coaching, a coach must understand how to distinguish between the four functions of evaluation, consulting, collaboration, and Cognitive Coaching. While in the Cognitive Coaching function, an effective coach established and maintained trust in the relationships, process, and the environment. They also envisioned, assessed, mediate, and applied strategies to enhance the states of mind. Through questioning, reflection, and paraphrasing, the coach puts the novice teacher in charge of his or her own learning (Brooks, 2000; Costa & Garmston, 2002).

Reflection. One of the vital components of Cognitive Coaching was developing teachers' ability to reflect on their practice. Garmston (2001) stated, "Developing craft knowledge without reflecting leads to the practice of teaching as a skilled labor" (p. 54). Experience by itself was not enough to prompt improvement; however, reflection based on experiences is the key to gaining self-awareness that resulted in the motivation to initiate change (York-Barr, et all, 2001). Researchers have suggested if teachers analyzed

their teaching through reflection practices, they were more likely to implement change than if they were simply told to change by supervisors and coaches (Moche, 2001; Stansburry & Zimmerman, 2002). Reflective practices not only addressed some of the needs of novice teachers such as strengthened relationships, building connections between theory and practice, and increase efficacy, reflection also assisted in creating the capacity to continuously learn and grow as an organization (Stansburry & Zimmerman; York-Barr et al.).

The concept of reflection was also supported in Nonaka and Takeuchi's (1995) theory of knowledge creation. In the knowledge creation spiral, individuals within the organization participated in meaningful dialogue and reflection to aid the articulation of tacit knowledge. Reflecting individually does have value; however, reflection with another "offers a safeguard against perpetuating only our own thoughts" (York-Barr, et all, 2001, p. 59). The ability to reflect at this level required a level of trust between the individuals involved (Tschanne-Morgan, 2004). Consequently, a trust lacking relationship hindered the possible outcomes of the Cognitive Coaching model.

Trust. Trust was essential for a foundation between individuals if the relationship was to be focused on learning (Costa & Garston, 2002; Lencioni, 2002; York-Barr, et all, 2001). In Cognitive Coaching, it is the responsibility of the coach to develop trust and rapport with the coachee (Costa & Garmston; Tschannen-Morgan, 2004). Because the coaching relationship relies on trust, any manipulation by the coach was incompatible with the goals of learning. Costa and Garmston emphasized successful coaches were seen as credible in trusting relationships. In support, Tschannen-Morgan (p. 15) stated, "trust

is manifest in situations in which we must rely on the competence of others and their willingness to look after what is precious to us."

The absence of trust hindered the productivity of the relationship and possibly created frustration and wasted time of those involved (Costa & Garmston, 2002; Lencioni, 2002). Lencioni contended desirable levels of trust required individuals to "make themselves vulnerable to one another, and be confident that their respective vulnerabilities will not be used against them" (p. 196). When this level of trust was evident, the workers could focus all their energy and attention to the task at hand rather than on "being strategically disingenuous or political with one another" (Lencioni, p. 196). Trust was developed over time, beginning with the first contact between the coach and the coachee and continued to develop through shared experiences and many instances of follow-through and credibility as well as the development and understanding of each other's unique attributes (Lencioni). If trust was evident, over time the coachee viewed the relationship as two professionals striving together to solve problems as opposed to a superior individual working with an inferior peer (Costa & Garmston).

Difference between Cognitive Coaching and mentoring. Cognitive Coaching differs from other mentoring or coaching models in that it "mediates invisible, internal mental resources and intellectual functions" (Costa & Garmston, 2002, p. 13). Traditional supervision models focused on teacher's behaviors or events that needed to be changed or altered. Supervisors, working as experts, tried to "fix" the problem and expected the subordinate to follow through (Brooks, 2000). In contrast, Costa and Garmston believed overt teaching behaviors were the products and artifacts of an individual's inner thought processes, values, beliefs, and intellectual functioning. "Changing the overt behaviors of

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instruction requires the alteration and rearrangement of inner, invisible cognitive

behaviors" (Costa & Garmston, p. 9).

Moche (2001) described the rationale behind Cognitive Coaching as viewing

teaching as a series of decision-making behaviors and teachers as having specific

intellectual reasons behind their actions. The coach helped the teacher understand their

cognitive functioning while teaching and assisted the teacher in clarifying what behaviors

were desired. In various mentoring programs throughout the country, there were vast

differences on the amount, if any, of training they receive, whereas Cognitive Coaches

received specific training on strategies to facilitate internal thought processes (Brooks,

2000; Costa & Garmston). It is often assumed an expert teacher would be able to

effectively mentor a novice peer; however, research has shown this practice does not

obtain optimal results (Brooks; Stansbury & Zimmerman, 2002).

Research on Cognitive Coaching. The literature on Cognitive Coaching contained

research on the effectiveness of Cognitive Coaching on pre-service and novice teachers.

Joyce and Showers (2002) discovered an effective coaching model directly transferred

learning to the classroom in 95% of the participants. This was a significantly higher rate

over the other methods considered. Brooks (2000) studied the effectiveness of master

teachers, trained in Cognitive Coaching, and their ability to affect their student teachers'

learning of the profession. The qualitative results were all positive and indicated the

student teachers felt they learned most from the reflective conferences held with their

master teachers. Although not an intended focus of the study, Brooks discovered the

student teachers that spent the second half of their field experience with a master teacher

not trained in Cognitive Coaching indicated they missed the discussions and feedback

they received in their first placement. Eger's (2006) study of second and third year teachers who received Cognitive Coaching found these teachers perceived their instruction, classroom management, and lesson planning had been improved.

Research has also shown student learning was improved when coaching was used to refine teachers' skills (Edwards, 2008; Moche, 2001; Rennek, 2002). The classroom environment was one component positively altered through the use of Cognitive Coaching. Teachers perceived their classrooms as being more open and friendlier, resulting in higher student participation (Edwards). When teachers themselves were trained in Cognitive Coaching, they found themselves "consciously creating an atmosphere of trust and nonjudgmentalness in their classrooms, seeking to help their students arrive at decisions on their own" (Edwards, p. 3).

Rennick (2002) discovered student achievement was significantly higher for a group of teachers who received Cognitive Coaching, in addition to a two-week literacy training, over a group who received the training alone. In this study, kindergartners, whose teachers were cognitively coached, received higher scores on word identification and hearing and recording sounds in words. Additionally, research on students of teachers trained in Cognitive Coaching showed gains in math problem solving skills. In one year, 86% of students, whose teachers had received Cognitive Coaching training, not only showed academic gains, but these students displayed more growth over students of teachers who did not have Cognitive Coaching training (Edwards, 2008).

The Five States of Mind

A foundation of Cognitive Coaching was the development of individuals' five states of mind. Costa and Garmston (2002, p. 124) maintained the "five states of mind

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inform human perception and are the resources that human beings access as they resolve

the tensions inherent in holonomous settings." Holonomy was coined by Koestler and

referred to the study of interacting parts within a whole; therefore, a holonomous person

recognizes their autonomy but understands their relationships and interactions within the

larger system (Costa & Garmston, 2007). The five states of mind cannot be seen, but they

were known by their effects and were recognizable in language and actions (Costa &

Garmston, 2002). They were also considered to be developmental and can be fostered

over an individual's life-time. Efficacy, flexibility, craftsmanship, interdependence, and

consciousness are the five sates of mind and will be explored in the following paragraphs.

 Efficacy. Efficacy was the belief of an individual that they had the resources

needed to face situations they encountered. Costa and Garmston (2002 & 2007) described

people with high efficacy as being optimistic, engaging in cause-and-effect thinking, and

able to operationalize concepts and translate them into deliberate actions. Efficacy was

the belief in "knowing I have the capacity to make a difference through my work, and

being willing to take the responsibility to do so" (Costa & Garmston, 2007, p. 11).

Conversely, a teacher with low efficacy displayed despair, hopelessness, blame, and often

withdraws from situations.

 It is important to remember efficacy was related to specific situations and tasks.

For example, a teacher may have felt high efficacy for teaching math and a low efficacy

for teaching band, coaching the track team, or fixing their car. Also, efficacy can be

affected through professional development efforts. Research supported the connection

between a teacher's personal efficacy and students' learning. A positive correlation lied

between a teacher's high efficacy in their technical knowledge of teaching and student's

progress in reading (Costa & Garmston, 2002). The converse was also found to be true; the higher the uncertainty (low efficacy) the less students learned. Wong (2004) and Birkeland and Johnson (2002) asserted new teachers needed to feel efficacious in their job in the classroom, or they would be at risk to leave the profession. High efficacy was related to comfort with risk taking, as was flexibility.

Flexibility. The second state of mind was flexibility and was considered a disposition and a set of skills. A person with a high level of flexibility had the mental skills to shift between macro and micro perspectives, present and future, logic and intuition, and individual and group (Costa & Garmston, 2002). They also maintained multiple goals and timeframes simultaneously. Flexible thinkers were not only comfortable with solutions that were *outside the box*, but specifically looked for them. Flexible skills included being able to view a situation through the perspectives of others, openness to ambiguity, comfort with changing their mind, and the ability to create novel approaches to problems (Costa & Garmston, 2007). Characteristics of high flexibility included humor, novelty, empathy, and risk taking. A flexible teacher was one who looked upon each experience as a learning opportunity and enjoyed the challenge of problem solving (Costa & Garmston, 2002).

Craftsmanship. Craftsmanship was the third state of mind and drove an individual to hone, refine, and constantly work for improvement. Individuals with high craftsmanship strived for perfection through a continuous search of data to study in efforts to refine skills. Costa and Garmston (2002) described characteristics of craftsmanlike people to include assessing their own performance and results, valuing data regarding their work, holding clear visions and goals, and striving for continuous

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improvement. The performance of an individual with high craftsmanship may appear flawless and effortless; however, the individual holds a great understanding of the complexity of their work and are able to identify weaknesses and flaws.

Research evidence suggested teachers grow in craftsmanship as a result of Cognitive Coaching. In a study of elementary and secondary teachers, a correlation was found between the number of Cognitive Coaching sessions and the teacher's thought process in their planning, evaluating, and applying of instructional skills (Costa & Garmston, 2002). The more sessions held the higher the craftsmanship, and there was no difference between the coach being an administrator or another teacher.

Interdependence. The next state of mind was interdependence and was defined as the "human need for reciprocity, belonging, and connectedness," and the inclination to become one with a larger system (Costa & Garmston, 2002, p. 403). Interdependent people had a sense of community and looked for ways to become involved in groups with a sense of patriotism and volunteerism (Costa & Garmston, 2007). Conflict was viewed as a source of learning for highly interdependent people, whereas those with low interdependence avoided conflict whenever possible. Costa and Garmston (2002) described interdependent people as valuing consensus and holding the belief that working together as a team was more efficient than solo work. Research supported the development of interdependence through the use of Cognitive Coaching. Teachers who were trained in or coached by Cognitive Coaches were scored higher by their supervisors on interdependence scales than their peers with no influences of Cognitive Coaching (Costa & Garmston, 2002).

Consciousness. Consciousness was the last of the five states of mind. The function of consciousness was to comprehend what was going on inside and outside of the body in such a way that it could be evaluated and acted upon in reality. Consciousness was described as "knowing what and how I'm thinking about my work in this moment, and being willing to be aware of my actions and their effects" (Costa & Garmston, 2007, p. 11). Individuals with an active state of consciousness have well-defined values and the ability to articulate them. Mental rehearsals and practices were a characteristic of a highly conscious person. It is important to remember individuals are only consciously aware of a small part of their mind, which allows them to be aware without knowing they are aware.

High consciousness resulted in deliberate actions of intervention. The development of consciousness was strengthened through self-observation and influenced by mediational relationships, personal intention, and practice (Costa & Garmston, 2002). As with the other states of mind, research also supported the growth of consciousness through the use of Cognitive Coaching. Teachers who were trained in Cognitive Coaching or participated as a coachee were found to have higher levels on consciousness, as evident through reflective practices about their teaching, than those educators with no influences of Cognitive Coaching (Costa & Garmston).

This section of the literature review provided a basic understanding of Cognitive Coaching. The role of the coach was explored as well as the importance of reflection and trust. Research was shared on how Cognitive Coaching has effected the development of novice teachers in addition to its effects on student achievement and classroom practices.

Finally, the five states of mind, efficacy, flexibility, craftsmanship, interdependence, and consciousness were defined.

Summary

The literature review provided an understanding on the depth of the teacher retention problem in America. Statistics on the numbers of teachers leaving within their first five years of teaching, and the financial cost to districts supported the need for districts to counteract this trend. Not only did districts endure financial strain, but also the students in systems of high turnover suffered academically. Factors surrounding teacher attrition were explored and found the issue to not be one resolved through training more people. Research on teacher retention indicated there were aspects of educational policies (at the federal, state, and district levels) and educational systems that contributed to qualified teachers leaving the field of education early in their careers.

Across the literature was evidence substantiating the need for strong induction programs to support novice teachers. Pre-service programs, no matter how thorough, did not provide the skills and support necessary to face the realities of teaching for a novice teacher. The most effective induction programs were comprehensive, systematic, and well planned to meet the needs of new teachers. They went beyond orientation facets to supporting the teacher in their growth and learning as a professional educator.

The Anderson School district believed they had developed an induction program, Teacher 101, designed to not only meet the needs of the beginning educators in their district but support teacher retention in their district as well. Their induction program had multiple components including a coach, trained in Cognitive Coaching, for each novice teacher. They have seen a dramatic decrease in their attrition rate and believed the

coaching component was at the core of their success; however, they have not completed research to verify their hypothesis. Cognitive Coaching was a nonjudgemental, interactive strategy focused on the development of an individual's cognitive process, use of internal resources, and the growth of the five states of mind to enhance self-directed learning (Costa & Garmston, 2002). The five states of mind were: efficacy, flexibility, craftsmanship, interdependence, and consciousness.

The remainder of this research focuses on the Anderson School District's induction program to determine if their work has effected student achievement and to determine if the Cognitive Coaching model is developing the states of mind of novice teachers. Chapter three will describe the purpose of the study and methods used in the study. Presented in chapter four is the findings of the research. Chapter five includes a discussion of the findings and present suggestions for further research. The appendix contains the instrument used to gauge the participant's states of mind plus communication with participants and the informed consent document.

CHAPTER THREE

Research Design and Methodology

Introduction

Teacher retention had been a growing concern among educators as the numbers of

teachers leaving the profession had increased to at least one-third within their first five

years, and had been documented as high as 50% in some school environments (Darling-

Hammond, 2003; Ingersoll & Smith, 2004). This was a frightening prospect as the

demand for additional teachers was projected to grow over the next decade due to growth

in birth rates and immigration rates combined with the increase in teachers eligible for

retirement, and the push for class size reduction (Algozzine, Gretes, Queen, & Cowan-

Hathcock, 2007; Darling-Hammond, 2000). Research on teacher retention cited many

reasons for teachers leaving early in their careers including lack of support and resources,

frustration, high stress, and insufficient professional development (Efers, Plecki, &

Knapp, 2006; NRTA, 2003). When districts were faced with high teacher turnover they

were not only faced with the dilemma of finding qualified candidates as replacements,

but they also had to attend to the additional financial strains of hiring and training new

staff. In addition, districts were accountable for the loss of productivity in student

achievement, which had been found to be lower with less experienced staff (Darling-

Hammond, 2003; Ingersoll & Smith, 2004; Wong, 2004).

Districts were faced with the challenge of developing effective teacher induction

programs to increase their teacher retention rates. "Unfortunately, schools do not operate

like hospital emergency rooms, where experienced personnel routinely watch novices

work, spot their mistakes, give advice and model new techniques" (Wayne, Youngs,

Fleischman, 2005, p. 76). Therefore, schools were left to stretch their resources to provide induction programs. Comprehensive induction programs can be costly, but when effective, reduce the district's cost of continually having to hire and train new teachers (Darling-Hammond, 2000 & 2003; Ingersoll & Smith, 2004). The Anderson School District utilized research of best practices to construct a beginning teacher program to support teachers within their first five years of teaching. Their program, Teacher 101, combined mentoring, coaching, networking, and professional development modules to provide a comprehensive approach to support novice teachers.

Since its beginning, the administrators over the Teacher 101 program have continuously received feedback from program participants regarding the various components to address participants' needs and program improvement for future participants. Data had also been collected regarding the retention rate of teachers who had participated in Teacher 101 in comparison to retention rates prior to implementation of the program. However, program administrators were interested in further analysis to examine the effectiveness of the Teacher 101 program as it relates to student achievement. Program leaders were also interested in determining if the coaching component, based on Cognitive Coaching theory, had effected the beginning teachers' development in their five states of mind as compared to their peers who had not participated in the Teacher 101 program.

This study was developed as a utilization-focused evaluation (Patton, 1997) to assist the program administrators in evaluating the Teacher 101 program from different perspectives than available at the time of the study. Additional data was sought comparing the student achievement rates of novice teachers who had participated in

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Teacher 101 with the novice teachers who had moved into the district within their first five years of teaching and were not eligible for Teacher 101 participation. This information would provide program administrators with data to determine if the program has had an impact on student achievement. Positive results would also assist them in pursuing additional funds to expand the program to teachers who currently do not qualify for program participation. Program administrators were also interested in exploring other impacts of Teacher 101 program, namely the coaching element, on the development of beginning teachers' states of mind.

Statement of Purpose

The purpose of this study was to determine if novice elementary teachers who have participated in the Teacher 101 program have had a greater impact on student achievement than novice elementary teachers who did not participate in the Teacher 101 program. Additionally, the study also explored the development of the states of mind in beginning teachers who had and had not participated in the Teacher 101 program. This chapter states the research questions, hypotheses, and null hypothesis. Following is a detailed explanation of the design of the study including the population and sample, the data collection, and the data analysis.

Research Questions

Within the context of the study, the following research questions were addressed:

1. Do students, in grades three through five, of novice teachers participating in Teacher 101 achieve at higher rates than students of novice teachers who have not participated in Teacher 101 as determined by:

a. Student's growth in reading comprehension based on a standardized

reading test utilized by the district; and

b. Student's growth in math level based on a standardized math test

utilized by the district.

2. Do novice elementary teachers (grades kindergarten through five) participating

in Teacher 101 report stronger levels in their five states of mind over novice

teachers who have not participated in Teacher 101 as determined on the Five

States of Mind Inventory -R for each of the following states:

a. Efficacy

b. Flexibility

c. Interdependence

d. Consciousness

e. Craftsmanship

3. What are the current perspectives of novice elementary teachers (grades

kindergarten through five) in the Anderson School District as related to:

a. Their intentions to stay in the Anderson School District,

b. Why they would like to stay or leave,

c. What supports have been beneficial in their professional growth,

and

d. What supports they believe would have assisted them in their

professional growth.

Research Hypotheses

The following research hypotheses, which related to the stated research questions, were also explored in this study:

1. Students, in grades three through five, of novice teachers participating in Teacher 101 will have higher growth rates in reading and math over students of novice teachers not participating in Teacher 101.

2. Novice elementary teachers (grades kindergarten through five) participating in Teacher 101 will report stronger levels of their five states of mind over novice teachers who have not participated in Teacher 101.

Statistical Hypotheses

The following subsequent null hypotheses are as follows:

1. The achievement of students, in grades three through five, who have novice teachers who participated in Teacher 101 is not statistically different from the students who have novice teachers who did not participate in Teacher 101.

2. The levels of the five states of mind between beginning elementary teachers (grades kindergarten through five) who have participated in Teacher 101 and those who have not participated in Teacher 101 is not statistically different.

Design of the Study

In this utilization-focused evaluation the researcher worked with stakeholders to determine not only what questions they want answered, but to seek input from the intended users into all aspects of the study to ensure the results assisted the organization in their intended purposes for the evaluation (Patton, 1997). This study was conducted in collaboration with the Anderson School District in an effort to assist them in further

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analysis of their beginning teacher induction program, Teacher 101. District administrators and directors of the program were consulted to gain knowledge of the existing data and determine areas of evaluation in which a more in-depth study was desired. As Patton insisted upon the researcher having continuous contact with the intended users throughout the study, the district contacts were consulted throughout the study and updated on the progress of the study to ensure the outcomes would be of use to the users and aligned with their desires for the research. This collaboration proved valuable in developing the researcher's understanding of the program's components and the district leaderships' needs for evaluation.

This quantitative study employed a quasi-experimental approach (Gay & Airasian, 2000). The research could not take a true experimental approach because participation in the Teacher 101 program was not randomly assigned but determined by the district and based on the novice teacher having no prior teaching experience. With the groups of novice teachers being pre-determined, a quasi-experimental approach best fit the study with the use of student achievement scores as the pre-test and post-tests to measure student growth. The pretest- posttest design allowed the researcher to gauge the growth of students over the course of the year and assisted in accounting for differences that would naturally exist between the groups (Gay & Airasain). This design allowed for the consideration of only the data for students who were in the classroom the whole school year. The researcher selected communication arts and mathematics as the two areas to best measure student achievement. These core subjects were historically considered the foundation of education and were the measures by which districts were held accountable for on state and federal levels. Improved achievement in both of these

areas was tied to school improvement regulations, Title I funding, and the ability to maintain local control of schools. Utilizing both content areas gave the study a broader scope of the teacher's ability to influence student achievement and also allowed for the researcher to examine any differences in student achievement that existed between these two core subjects.

The second part of the study was designed to gauge the developmental levels of the five states of mind for participants in Teacher 101 and their peers who did not participate in Teacher 101. An online survey was selected as the most effective way to gather the perceptual information from the selected population. Self-administered surveys can be effective in gathering information from large groups of individuals in a short time-frame (Fink, 2006). An adaptation of The Five States of Mind Inventory (Ushijima, 1996) was administered to both groups of novice teachers through the online survey. Open-ended qualitative questions were also added to the end of the survey pertaining to their intentions to stay with the district, along with an explanation of what keeps them employed in the Anderson School District or why they desire to leave. These questions gave insight into how the respondents were thinking about their status in the district that could not be obtained through fixed answer questions (Fink).

Population and Sample

The population for the study included about 200 novice teachers teaching within the Anderson School District and about 200 students taught by novice teachers during the 2006-2007 school year. The Anderson District is in an urban mid-western community and serves 25,000 PK-12 grade students with approximately 1,450 teachers. At the time of the study, the district was comprised of predominantly Caucasian students making up

87.5% of the student population. The minority population was comprised of small percentages of African American (6.6%), Hispanic or Latino (2.9%), Asian or Pacific Islander (2.3%), and American Indian (.6%). The free and reduced lunch rate was 42.6% and had increased each year. The following paragraphs provide details of the specific groups of teachers selected for the study.

In order to assess student achievement, two groups of novice teachers were selected based on the following criteria. Both groups contained teachers who taught grades three through five and who were in their second or third year of teaching during the 2006-2007 school year. Grades three through five were selected due to the current beginning and end of the year assessments administered across the district for these grades. The study was limited to teachers in their second and third year of teaching because the program's initial implementation began three years ago. Therefore, to have participants in both groups, the only teachers available were those who had taught two or three years.

Group one contained teachers who began their teaching career for Anderson School District and had completed the requirements of the Teacher 101 program. Teachers who had not completed requirements were not selected because they did not experience the full impact of the comprehensive program where all components were designed to complement each other.

Group two consisted of novice teachers who moved into Anderson School District after their first year of teaching. This group of novice teachers was not eligible for participation in the Teacher 101 program. Once this list of teachers was created, the teachers were pair-matched with the participants in the first group.

Pair-matching allowed for the researcher to control variables that may influence performance (Gay & Airasian, 2000). Pairs were matched based on the following variables: grade level taught, total years experience, and their school status as a Title I or non-Title I site. Based on the criteria, there were five teachers who had not participated in Teacher 101 at the selected grade levels and thirty-four teachers who had participated in Teacher 101. In most cases, there was only one option for matching. If there was more than one possible match, the match was made randomly. This process resulted in five pair-matches. Three matches taught grade three, and there was one match each for grades four and five.

To assist with validity of the study, it is important to account for other contributing factors to student achievement through pair-matching based on specific variables. Grade level was selected as a variable because of the differences in student growth that are possible between grade levels. The teacher's total years experience was considered because research has found student achievement is higher the more experience a teacher has in the classroom (Darling-Hammond, 1997). Therefore, it would be unfair to compare a teacher with four years of experience with one who has two years. Student population often varies between buildings and is greater between Title I and non-Title I sites. Using a school's status as Title I or non-Title I as a variable for matching assisted in creating more comparable groups. The district utilized a district wide curriculum adoption process so all teachers should have the same curriculum training and resources. However, there are a few schools piloting different curriculum programs so teachers from these schools were not selected for the study.

The second part of the study utilized two groups of novice teachers. The first group of participants was teachers who have participated in the Teacher 101 program since its implementation. The second group of teachers was teachers new to the district who had not participated in the program and was in their first four years of total teaching experience. Only teachers coming in with four years or less experience were selected to parallel with the total teaching years experience of the Teacher 101 participants. Demographic data was collected at the beginning of the survey, such as gender, years experience, and their school status as a Title I or non-Title I school. This data will allow the researcher to further determine comparability between the two groups.

Data Collection

This section contains information regarding the data collection for the study. First, each instrument is described and contains information regarding reliability and validity. Then procedures used for obtaining IRB approval and collecting data will be explained. A copy of the Five States of Mind Inventory-R and informed consent documents are included in the Appendix.

Instruments

The study utilized three instruments to answer the research questions. To answer the questions in regard to student achievement growth separate assessments were used to gauge growth in reading and math. An additional instrument was used to gauge teacher's perceptions of the five states of mind. The remainder of this section will describe these instruments in detail.

Two sources of data were used for this study to determine the growth in student achievement for the students, in grades three through five, in the classrooms of both

groups of novice teachers. In order to evaluate the growth in reading, the Scholastic

Reading Inventory (SRI) was used. Student's growth in mathematics was measured

utilizing the STAR Math assessment. In the Anderson School District, the SRI was

administered to students in grades two through five at the beginning and the end of the

year, and the STAR Math was administered to students in grades three through five at the

beginning and end of the year. Both assessments were computer based. The following

paragraphs explain both assessments in detail and include information on validity an

reliability.

SRI. The SRI was an interactive assessment designed to measure how well readers

read literature and expository texts of varying difficulties (Scholastic, 1999). In this test,

reading comprehension was measured through assessing a reader's skills on identifying

details, cause and effect relationships, and sequences of events. Readers were also asked

to draw conclusions, make generalizations, and derive comparisons. The SRI did not

require prior knowledge of the passage, ideas outside of the passage, vocabulary taken

out of context, or formal logic. During the administration of the test, the computer

adapted the test continually according to the student's responses to the questions. When

the computer had enough information about the student's reading level, the test stopped

and assigned the student a lexile score.

Scholastic supported the face validity and construct validity of their instrument

with research correlating the SRI with several other measures of reading comprehension

and field testing in North Carolina and Florida. Scholastic also took measures to ensure

the reliability of the SRI. The SRI was developed using the Rasch one-parameter item

response theory model to relate a student's ability and the difficulty of the items. The

error associated with any one score is also unique because each student takes a different test based on how they answered each question (Scholastic). The standard error of measurement is dependent upon what the computer knew about the child. If previous reading level information was known, along with the current grade level, the standard error of measurement was reduced. Scholastic's research indicated the standard error of measurement to be between 54 lexile points and 104 lexile points depending on the information known and the number of questions a reader answers.

The results of the SRI were reported as a scaled score referred to as lexile measures and ranged from beginning readers (below 100 lexile) to 1500 lexile. Scores on the SRI were criterion-referenced; therefore, a student's score should be reflective of their knowledge of those skills tested. A student's lexile score was related to the material they should be able to read on the Lexile Framework (Scholastic, 1999). Results were also categorized into performance standards based on grade level and were divided into four levels: At-risk, Basic, Proficient, and Advanced. These performance standards were descriptors that described what students must do in order to demonstrate proficiency with respect to the specific content (Scholastic).

STAR Math. The STAR Math computer-adaptive assessment was a norm-referenced mathematics test and database for students in grades three through twelve (Renaissance Learning, 2006). As students worked through the multiple-choice test, the computer determined the difficulty of the next question based on the student's answers to the previous question. Results were interpreted through a grade equivalent score, a normal curve equivalent score, a percentile rank, and a scaled score. The STAR Math assessment was normed in 2002 through a sample representative of the United States

school population based on the variables of geographic region, district enrollment, and socioeconomic status (Renaissance Learning). Renaissance Learning supported the validity of the STAR Math test through correlations with other well-established standardized assessments. In addition, the U.S. Department of Education's National Center on Student Progress and Monitoring (2006) determined the STAR Math assessment to meet their standards of validity and reliability. As with the SRI, the standard error of measurement for the STAR Math was unique to each student because the computer adapted the test for the student. However, Renaissance Learning had calculated the aggregate mean standard error of measurement value to be 40 over all grade levels.

The Five States of Mind Inventory-R. The instrument used to collect data on the teacher's states of mind was adapted from Ushijima's (1996) work to create an instrument to assess Costa and Garmston's (2002) five states of mind. The Five States of Mind Inventory (FSMI) was designed to gauge the developmental level for each of the five states of mind: efficacy, flexibility, consciousness, craftsmanship, and interdependence. The survey contains a total of 30 questions and was divided into two parts. Part one was a category scale (Fink, 2006), which asked the participants to read a statement and rate how true the statements were for them when considering their work setting. Part two was a semantic deferential scale (Johnson & Christensen, 2000) and asked participants to place themselves on a continuum between two concepts based on their perception of how they see themselves in their work setting.

In the creation of the instrument, Ushijima (1996) found the FSMI to have face validity. Validity was considered to be the degree to which an assessment measured what

it was intended to measure (Gay & Airasian, 1996). The items for efficacy, flexibility, and consciousness all received a 100% validity score from the high experts on all but one item which had an 88% score of validity. The validity score was 100% from high experts on all items. Interdependence had validity of scores of 100% from high experts on all items except one that received a 77%. Reliability tests were conducted for each item in addition to each set of items for the individual states of mind. Reliability was the degree to which a test consistently measured what it was intended to measure (Gay & Airasian). The Alpha Coefficient Reliability for each state of mind was .6931 for efficacy, .5319 for flexibility, .7182 for consciousness, .5866 for craftsmanship, and .6338 for interdependence.

The instrument was adapted based on Ushijima's (1996) recommendations and the needs of the current study. The revised instrument was named the Five States of Mind Inventory – R (FSMI-R) (Appendix A). First, demographic data was added at the beginning of the survey to allow the researcher the ability to view the data from the different perspectives of gender, years experience, or school's status of Title I or not. The scale in each part of the instrument was altered to include six points based on Ushijima's recommendations for future use of the instrument. On part one, phrases were added to each question to remind the participant to focus on their work setting as they complete the survey. Some of the single descriptive words used in Part 2 were altered to phrases to allow for more description of the concept being tested and in attempt to avoid the perception of one concept having a negative connotation. After revisions were made, the FSMI-R had an expert review of Cognitive Coaching trainers as well as the

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administrators in the Anderson School District involved in the study. This review

provided assurance the rewording of items did not alter the meaning behind the question.

To conclude the survey, open ended questions were asked to assist the district in

determining the participants' attitudes toward staying in the district and why they were

choosing to do so or not. This qualitative aspect provided further information on the

participant's feelings about staying in the district. Furthermore, the information collected

provided insight into supports provided by the district that they felt were most effective

with supports they desired. This portion of the FSMI-R was also reviewed by district

administrators of the Anderson School District to ensure the research would provide

desired information.

Procedures

The researcher completed the IRB process plus followed the district's policy for

obtaining approval for research within the district. Permission was granted from the

district's Office of Research and Assessment. The following information provides details

on how information and data was obtained.

Pair-matches between Teacher 101 participants and non Teacher 101 participants

were created from lists provided to the researcher from the school district's Human

Resources Department and the Professional Development Department. Lists contained

information necessary to create pair-matches based on grade level taught, years of

teaching experience, and the school's designation as a Title I or non Title I school. Once

pair-matches were created, student achievement data was requested and obtained from

the Anderson School District's Data and Accountability Department. The data received

did not contain any identifying student information. At the conclusion of the study all data was destroyed.

In order to generate the list of participants for the FSMI-R, information was provided to the researcher from two sources. First, a list of teachers who participated in Teacher 101 was provided through the professional development office. Combining this list with a list of all new hires for the last few years, provided by the Human Resources office, resulted in a list of teachers who were within the first four years of teaching but had not qualified to receive Teacher 101 services. All of the teachers (186) with four years or less of classroom teaching experience, still currently teaching within the district, were contacted through email for participation in the study (Appendix B). The email contained a brief description of the study and provided a link to the FSMI-R on the Survey Monkey (http://www.surveymonkey.com) site. Participants received two follow up emails reminding them of their opportunity to participate and thanking them if they did complete the survey.

Data Analysis

The data were analyzed using mainly quantitative methods that would provide the necessary information to answer the research questions. The data were treated utilizing the SPSS statistical program. The description of data analysis will first explain how the student achievement data were synthesized to answer the first research question. Following, a description of how the data were treated to answer the second research question pertaining to the five states of mind is provided. Then a description of how the open-ended questions were analyzed concludes this section.

For this quasi-experimental study, student achievement data were utilized to answer research question one. Based on the five sets of pair-matched teachers, students' SRI lexile scores and STAR Math standard scores were collected from the district. Beginning of the year and end of the year data were included for each assessment on each student. The student achievement data were first examined through an independent samples *t*-test (Gay & Airasian, 2000). A *t*-test was used, for both sets of assessment scores, on the pre-test scores to determine similarity between groups. Results assured groups were similar. The student's gain was calculated for the SRI and STAR Math by subtracting the beginning of the year score from the end of the year score. The teacher type (Teacher 101 participants were coded as T101 and non Teacher 101 participants were coded as NT101) was used as the independent variable. The gain scores, calculated for each student, was the dependant variable. An independent *t*-test was used on the gain scores to determine any significant differences in student achievement between the groups of teachers. The alpha level of significance was set at .05.

Research question two was answered through data obtained from the FSMI-R. The data collected from parts two and three of the FSMI-R was first combined into a summated rating scale resulting in a single score for each participant on each of the five states of mind. The summated rating scale allowed the researcher to combine the answers from each of the questions around one concept, in this case a state of mind, so a comparison could be made between the two groups of participants (Johnson & Christensen, 2000). Reverse coding was used on some items. This process provided each participant with a sub scale score for each of the five states of mind. The teacher group (T101 or NT101) was the independent variable and the dependent variable was the five

subscale scores obtained from the FSMI-R. An independent *t*-test was used on the

subscale score data to determine if significant differences existed between the two groups

of teacher in any of the five states of mind. The alpha level of significance was set at .05.

The final part of the FSMI-R contained mainly open-ended questions intended to

answer research question three. The analysis completed used qualitative strategies of

coding and identifying themes within the data (Merriam, 1998). The data collected were

disaggregated between those who indicated they agreed or disagreed they had thought

about leaving the district. Demographic data of the two groups were compared to

determine the composition of the groups. The qualitative data were explored using a

constant comparative method (Merriam). This strategy allowed the researcher to begin

with a particular piece of data or thought and constantly compare it across the different

questions and between the two groups. This process allowed for the immersion of

common themes and different themes in the data.

Summary

This chapter focused on the purpose and design of the study. The problem of

teacher retention was explained and justification given for research of the effectiveness of

teacher induction programs. Research questions and hypotheses were shared along with

the null-hypothesis. The study utilized two groups of novice teachers from the Anderson

School District. One group participated in the district's new teacher program, Teacher

101, and the other group of novice teachers moved into the district after their first year

and was not eligible for participation. Methods for data collection and an explanation of

each piece of data were explained in detail. An explanation of how the data were

analyzed in order to answer the research questions was described.

The results of the data collection and the analysis of the data are presented in chapter four. In chapter five, a summary of the study includes the findings, the implications for practice, and a discussion of the recommendation for future research will be shared. The appendix follows and contains the survey instrument used in gauging the participants' states of mind as well as email correspondence between the researcher and the participants.

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF DATA

Introduction

The purpose of the study was to assist the Anderson School District in evaluating their teacher induction program. The Teacher 101 program had completed its first three years of implementation and district leaders desired a deeper understanding of how the program had impacted student achievement. In addition to student achievement, district leaders also were interested in exploring the effects of Cognitive Coaching between teachers who had and had not participated in Teacher 101. The study was designed as a Utilization Focused Evaluation (Patton, 1997) where the researcher collaborated with district leaders to design the study to meet their needs. This quantitative study employed a quasi-experimental approach and contained one qualitative element to examine the views of novice teachers in the Anderson School District. The following research questions guided the study and were considered throughout the data analysis process:

1. Do students, in grades three through five, of novice teachers participating in Teacher 101 achieve at higher rates than students of novice teachers who have not participated in Teacher 101 as determined by:

  a. Student's growth in reading comprehension based on a standardized reading test utilized by the district; and

  b. Student's growth in math level based on a standardized math test utilized by the district.

2. Do novice elementary teachers (grades kindergarten through five) participating in Teacher 101 report stronger levels in their five states of mind over novice

teachers who have not participated in Teacher 101 as determined on the Five

States of Mind Inventory -R for each of the following states:

    a. Efficacy

    b. Flexibility

    c. Interdependence

    d. Consciousness

    e. Craftsmanship

3. What are the current perspectives of novice elementary teachers (grades

kindergarten through five) in the Anderson School District as related to:

    a. Their intentions to stay in the Anderson School District,

    b. Why they would like to stay or leave,

    c. What supports have been beneficial in their professional growth,

      and

    d. What supports they believe would have assisted them in their

      professional growth.

The remainder of this chapter is dedicated to the analysis of the data collected for the study. First, a short summary will review the population and sample used in the study along with the data collection instruments. Then the data are presented for each research question separately. Further explanation of the findings is found in chapter five.

Population and Sample

The population and sample for the study was derived from novice teachers in the Anderson School District. To answer the first research question, pair-matches were created of elementary teachers who had and had not participated in the Teacher 101

program. Five matches were created based on years of classroom teaching experience, grade level taught, and the school's distinction as a Title I or non Title 1 school. Table 1 shows each pair match and their unique set of factors.

Table 1

Classroom Pair Matches for Student Achievement Comparisons

Pair Match	Grade	Teacher's Experience	Title I
1	3	3	Yes
2	3	2	Yes
3	3	3	No
4	4	3	Yes
5	5	2	Yes

The growth in reading and math for the students of these ten teachers were analyzed to determine if the Teacher 101 program had impacted student achievement. The analysis was calculated based on only students who were enrolled at the beginning and the end of the year. Two hundred and one students' scores were used in answering question one. The group containing teachers who participated in Teacher 101 included 103 students. The group containing teachers who had not participated in Teacher 101 included 98 students.

In order to answer research questions two and three, the population was selected from lists of new hires obtained from the Anderson School District's human resource department. Elementary teachers with less than five years of teaching experience were invited to participate in the online survey of the FSMI-R regardless of if they had or had

not participated in the Teacher 101 program. Emailed invitations went to 186 elementary

teachers, 89 responded to the survey; however, only 85 completed the entire survey. This

indicated a 48% return rate on the survey. Only the completed surveys were used to

answer research question two. All surveys with answers on the third part were used in

answering research question three.

Data Collection Instruments

Three different instruments were used to answer the research questions. To

analyze the students' academic growth, beginning of the year and end of the year

assessments currently being administered by the district were utilized. Growth in reading

was calculated based on the students' lexil score on the SRI. Growth in mathematics was

found using the students' standard score on the STAR Math assessment. The instrument

used to gauge the teacher's five states of mind was the FSMI-R (Appendix A). The

FSMI-R was adapted from Ushijima's (1996) work to create an instrument to measure

the five states of mind.

Data Analysis

The study mainly engaged quantitative methods to answer the three research

questions. The quantitative data were treated using SPSS release 11.0 and the alpha level

of significance level was set at .05. The qualitative data were probed through coding and

theme identification strategies (Merriam, 1998). In efforts to clearly present the results,

this section will present the analyzed data for each of the research questions separately.

Research Question One

Research question one compared the student achievement growth of novice

teachers who had participated in Teacher 101 compared with the student achievement

growth of novice teachers who had not participated in Teacher 101. Comparisons were

made in both reading and math using assessments the district already administered at the

beginning and end of the year. First, an independent samples *t*-test was conducted on the

beginning of the year scores to ensure similarity between the groups. Table 2 displays the

comparison of means for the SRI reading assessment and the STAR Math mathematics

assessment.

Table 2

Comparison of Means on Beginning of the Year Scores (N=201)

Group	Assessment	n	M	SD	SE
T101	SRI	103	503.00	347.03	34.19
NT101	SRI	98	439.83	417.28	41.93
T101	STAR Math	103	549.88	110.16	10.85
NT101	STAR Math	98	558.20	103.25	10.377

Note. T101=participants in Teacher 101; NT101 = not participants in Teacher 101.

The teacher type was assigned based on if the teacher had participated in Teacher 101

(T101) or not participated in Teacher 101 (NT101). The set of beginning of the year SRI

scores were found to be similar between the group of students whose teachers had

participated in Teacher 101 and the group of students whose teachers had not participate

in Teacher 101 (t(200)=1.171; p>.05). The set of beginning of the year STAR Math

scores were also found to be similar between the two groups of students (t(200)=-.553;

p>.05). These tests determined the comparison of each group's growth scores would be a

valid comparison.

To answer research question one, growth scores were calculated for each student in reading and in math. The growth score was found by subtracting the beginning of the year score from the end of the year score for each student. These scores were used as the dependent variable, and the teacher group was the independent variable in an independent samples *t*-test to determine if there was a significant difference between the two groups. Table 3 presents the statistics of the SRI growth scores for reading and the STAR Math growth scores used to gauge growth in mathematics.

Table 3

Comparison of Means for Growth Scores (N=201)

Group	Assessment	n	M	SD	SE
T101	SRI	103	172.48	175.28	17.27
NT101	SRI	98	167.95	184.24	18.61
T101	STAR Math	103	99.79	67.38	6.60
NT101	STAR Math*	97	80.24	75.72	7.69

Note. T101=participants in Teacher 101; NT101 = not participants in Teacher 101. * One outlier was removed from the analysis.

Reading growth. The mean growth score for reading of students' whose teacher had participated in Teacher 101 was 172.48 (s.d.=175.28). The mean growth score for students' whose teacher had not participated in Teacher 101 was 167.95 (s.d.=184.24). Although the mean was greater for the Teacher 101 group, there was not a significant difference found between the scores of students whose teachers had participated in Teacher 101 with those who had not participated in Teacher 101 ($t(199)=.178$; $p>.05$).

Math growth. The mean growth score for math of students' whose teachers had participated in Teacher 101 was 99.79 (s.d.=67.38). The mean growth score for students'

whose teachers had not participated in Teacher 101 was 80.24 (s.d.=75.72). One outlier, that was five standard deviations above the mean, was removed from the non Teacher 101 group. Removing outliers is appropriate in statistical analysis so one score does not bias the mean and inflate the standard deviation of the group (Field, 2005). As reflective of the reading scores, the Teacher 101 group had a higher mean; however, this did not establish a significant difference over the non Teacher 101group ($t(198)=1.931$; $p=.055$).

Hypothesis 1

The first hypothesis stated, Students of novice teachers, in grades three through five, participating in Teacher 101 will have higher growth rates in reading and math over students of novice teachers not participating in Teacher 101. After conducting an independent samples *t*-test on the growth scores for reading and math, no significant difference was established in the student achievement between students whose teachers had participated in Teacher 101 and those whose teachers had not participated in Teacher 101. Therefore, the null hypothesis is retained.

Research Question Two

The second research question focused on determining if there was a difference in the five states of mind as defined by Cognitive Coaching (Costa & Garmston, 2002, 2007) between teachers who had and had not participated in Teacher 101. To answer research question two, novice elementary teachers currently teaching in the Anderson School District were invited to participate in an online survey, the FSMI-R. The research hinged on comparing teachers who had participated in Teacher 101 with those who had not. Table 4 displays the breakdown of the survey participants.

Table 4

FSMI-R Participants in Teacher 101 or Not (N=89)

	Actual Count	Percentage
Teacher 101 Participants	62	69.7%
Non Teacher 101	27	30.3%

The beginning of the FSMI-R also asked for additional demographic data from the participants. Table 5 displays the demographic data of those who participated in the survey. As expected there were large differences between male and female teachers and the number of novice teachers teaching in Title I schools compared to non Title I schools. The data does show similar representation across the years of experience. All grades and subjects were represented in the participants; however, the areas of kindergarten, grade three, grade four, grade five, special education, and other had heaver participation in the survey.

Table 5

Demographic Data of FSMI-R Participants (N=89)

	Descriptor	Actual Count	Percentage
Gender	Male	8	9%
	Female	81	91%
Years of Experience	1	16	18.2%
	2	18	20.5%
	3	22	25%
	4	18	20.5%
	5	14	15.9%
Subject Taught	K	11	12.5%
	1	6	6.8%
	2	6	6.8%
	3	15	17%
	4	11	12.5%
	5	10	11.4%
	SPED	10	11.4%
	Art	2	2.3%
	Music	3	3.4%
	PE	1	1.1%
	Other	13	14.8%
Title I School	Yes	67	75.3%
	No	22	24.7%

The next two sections of the FSMI-R contained items to measure the participant's

five states of mind as they related to their classroom and work place setting. Scores from

the category scale and the semantic differential scale were combined to give each

participant a summated rating for each of the five states of mind. These scores were then

compared using an independent samples *t*-test with the teacher group (T101 or NT101) as

the independent variable and the summated rating as the dependant variable. Table 6

displays the results of the statistical analysis.

Table 6

FSMI-R Summated Rating Scale Results (N=85)

State of Mind	Group	n	M	SD	SE
Efficacy	T101	60	31.70	2.72	.35
	NT101	25	30.72	3.24	.64
Flexibility	T101	60	29.21	3.71	.48
	NT101	25	28.24	2.75	.55
Interdependence	T101	60	31.65	2.93	.37
	NT101	25	30.60	3.00	.61
Consciousness	T101	60	31.96	3.05	.39
	NT101	25	32.04	2.77	.55
Craftsmanship	T101	60	31.90	2.73	.35
	NT101	25	31.72	2.65	.53

Efficacy. The first state of mind was efficacy. On the efficacy subscale the

teachers who had participated in Teacher 101 had a mean of 31.70 (s.d.=2.72) and those

who had not participated had a mean of 30.72 (s.d.=3.24). A significant difference was not evident between the two groups ($t(83)$=1.42; p>.05).

Flexibility. The next state of mind considered was flexibility. The mean for flexibility of teachers who had participated in Teacher 101 was 29.21 (s.d.=3.71) and 28.24 (s.d.=2.75) for those who had not participated in Teacher 101. There was not a significant difference established between the two groups of teachers ($t(83)$=1.183; p>.05).

Interdependence. The third state of mind evaluated on the FSMI-R was interdependence. As with efficacy and flexibility, the subscale mean for interdependence was higher for the teachers who had participated in Teacher 101 with a mean of 31.65 (s.d.=2.9) compared to a mean of 30.6 (s.d.=3.06) for teachers who had not participated in Teacher 101. A significant difference was not found between the two groups of teachers ($t(83)$=1.48; p>.05).

Consciousness. Consciousness was the fourth state of mind explored through the FSMI-R and the only state the non Teacher 101 group had a higher mean. The mean of the teachers who had not participated in Teacher 101 was 32.04 (s.d.=2.77) and the mean of teachers who had participated in Teacher 101 was 31.96 (s.d.=3.05). This state of mind had the closest means between the two groups out of all of the states of mind. No significant difference was discovered between the groups ($t(83)$ = -.103; p>.05).

Craftsmanship. The final state of mind evaluated was craftsmanship. The mean of the teachers who had participated in Teacher 101 was 31.9 (s.d.=2.73). The teachers who did not participate in Teacher 101 had a mean of 31.72 (s.d.=2.65). As with all the other

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states of mind, there was no significant difference established between the two groups of teachers for craftsmanship ($t(83)=.279$; $p>.05$).

Hypothesis 2

The second hypothesis stated, novice elementary teachers (grades kindergarten through five) participating in Teacher 101 will report stronger levels of their five states of mind over novice teachers who have not participated in Teacher 101. The analysis of the FSMI-R included an independent samples *t*-test on the subscales for each of the five states of mind. No significant difference between the two groups of teachers was confirmed in the analysis for any of the five states of mind; therefore, the null hypothesis is retained.

Research Question 3

The third research question took a qualitative approach to examine the perspective of novice teachers on their intentions to stay in the Anderson School District. Additionally, the questions allowed the researcher to explore the novice teachers' thoughts behind why they would stay or leave and the supports they found beneficial. First, this section will include some quantitative data to assist in describing the group of teachers who had and had not considered leaving the Anderson School District. Then, each portion of the third research question will be presented separately, followed by a summary.

Intentions to stay in the Anderson School District. The final portion of the FSMI-R first asked the participants to share their intentions on staying in the Anderson School District. The initial question asked the teachers to indicate if they have considered leaving the Anderson School District. How each participant responded to the question determined

the next set of questions they received. Participants were divided into two groups, those

who indicated they strongly disagreed, disagreed, or somewhat disagreed were one group.

Table 7 displays the disaggregation of how the participants specifically answered the

question.

Table 7

Results of Considering Leaving the District (N=86)

Response	Actual Count	Percentage
Strongly Disagree	30	34.9%
Disagree	16	18.6%
Somewhat Disagree	2	2.3%
Somewhat Agree	10	11.6%
Agree	18	20.9%
Strongly Agree	10	11.6%

The rest of research question three is discussed based on the two groups created

by how participants answered the question about considering leaving the Anderson

School District. There were forty-eight participants who were in the disagree group,

which represented 55.8% of the survey's population. The second group was comprised of

those who specified they strongly agreed, agreed, or somewhat agreed. The agreed group

contained thirty-eight teachers and represented 44.2% of the total survey's participants.

In the comments on the survey, only two participants indicated they were leaving the

district at the close of the school year.

The agreed group and the disagreed group were very similar in composition.

Table 8 contains a description of these two groups of teacher. The percentage given is the

breakdown for the specific group, agreed or disagreed, not the percentage of the total

survey participants.

Table 8

Description of Groups for Research Question Three (N=86)

		Agreed		Disagreed	
		Actual Count	Percentage	Actual Count	Percentage
Gender	Male	4	10.5%	3	6.3%
	Female	34	89.5%	45	93.8%
Total Years	1	5	13.2%	10	20.8%
	2	11	28.9%	7	14.6%
	3	4	10.5%	18	37.5%
	4	11	28.9%	7	14.6%
	5	7	18.4%	6	12.5%
Teacher 101 (N=61)		27	71.1%	34	70.8%
Non Teacher 101 (N=25)		11	28.9%	14	29.2%
Title I School	Yes	29	76.3%	36	75%
	No	9	23.7%	12	25%

It should be noted the similarities between the group who had considered leaving the

district (agreed group) and the group who had not considered leaving the district

(disagreed group). In particular the representation of teachers who had and had not

participated in Teacher 101 in each group is comparable. Of the 38 teachers who agreed they had considered leaving the district, 27 had participated in Teacher 101. This represents 71.1% of the agreed group and 44.2% of those who had participated in Teacher 101 who took part in the survey. The second group was those who disagreed about considering leaving the district. This group had 34 Teacher 101 participants that totaled 70.8% of the disagreed group. They represented 55.7% of the total Teacher 101 group completing the survey.

Reasons to stay in the district. In efforts to answer why teachers in the Anderson School District stay or leave both groups were asked what specifically keeps them in the district. Additionally, the group that agreed they had considered leaving was asked what was attractive about other districts or job fields. This information was coded using a constant comparative method (Merriam, 1998). As the data is presented, common themes will be evident between the groups. First, information regarding why teachers stay in the Anderson School District will be shared followed by what teachers said was attractive about other districts or job fields. Table 9 displays an overview of the themes for why teachers said they stay in the Anderson School District.

Table 9

Themes for Reasons to Stay in the District

	Agreed Group*	Disagreed Group*
Predominant Themes	• Location • Salary Package	• Relationships • Supports & Resources
Moderate Themes	• Relationships • School Environment	• School Environment • Location of District • Feelings about Teaching • Focus on High Standards
Minor Themes	• Professional Development	(none)

Note: Groups determined by answers to question "I have considered leaving the Anderson School District.

Several themes were apparent in the data from teachers who disagreed about considering leaving the district in regards to what specifically keeps them in the Anderson School District. Two themes were strongly supported in the data. The first theme was that of relationships. There were mentions of students, colleagues, and administrators who impacted their thoughts on staying in the district. Furthermore, references were made to strong collaborative relationships and colleagues being positive and encouraging.

The second strong theme related to the supports and resources available to the staff in the Anderson School District. The Teacher 101 program was mentioned often as well as the Teacher 101 coaches. One respondent indicated, "My [Teacher 101] coach is extremely helpful and supportive. My year has been manageable because of her support"

(Q39, response 17). Several participants named curriculum resources, professional

development opportunities, and support systems within their buildings and on a district

level as reasons why they stay in the district.

Additionally there were more global comments about the support and professional

growth opportunities found in the Anderson School District. One teacher stated, "[The

Anderson School District] has provided a solid foundation for my career in education

where ever it may lead me. I know that the professional opportunities afforded to us will

prepare me for any educational position. While I stay in the district I know that there will

be the support I need to stay up to date with the latest practices and research to give my

students the best education possible" (Q39, response 8). It was apparent across the

responses there was a great appreciation for the district's efforts in providing supports

and resources for its teachers.

In addition to the two main themes, there were additional concepts that appeared

in the responses although they were not as predominant. The first pertained to enjoying

the school environment where the teacher taught. One respondent symbolized her school

environment as a family. Others described their school environment as positive and

caring. The next theme revealed was location of the district. Proximity to home and ties

to the community were reasons given by these teachers for staying in the Anderson

School District. An additional theme involved feelings about teaching. These concepts

varied from enjoyment to feeling they can do a good job and make a difference in

student's lives.

A concluding theme from this question was one only found in the responses of

those who disagreed about considering leaving the district and was not found at all in

those who indicated they had considered leaving. This theme involved believing the district is focused on high standards for students. One participant described the Anderson School District as one that "embraces change; it's growing and trying hard to do the right things for its students" (Q39, response 10). Additionally, another teacher responded, "There is a deep-rooted respect and interest in this district in each and every child served. The children are our focus. I truly would not want to work elsewhere" (Q30, response 16).

In reviewing the responses of those who agreed they had thought about leaving the district, there were some similar themes as to why they stay compared to those who had not thought about leaving the district. However, the strength of the themes was dissimilar. The predominant themes revolved around location and salary packages. Location included comments on travel distance, personal connection to the district, and closeness of family. The responses relating to salary packages incorporated thoughts on competitive pay, benefits, and having a steady income.

Two moderate themes emerged as reasons why novice teachers continue working in the Anderson School District, even though they had considered leaving. These two themes were relationships and school environment. As mentioned by the other group of teachers, there were many comments about students, supportive colleagues, and building level administration. Examples of comments include one teacher who indicated a "strong network of teachers" (Q37, response 1) as their reason for staying. One response, echoed by others, was from a novice teacher who indicated "My principal is awesome to work for and the staff are great…the students are a challenge that keeps my job exciting" (Q37, response 7). As far as school environment, comments were very specific to indicate they

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felt strongly about their particular school, but not the district. For example, one teacher stated, "the actual school that I am at, the only problems I have are outside of the school building" (Q37, response 16). Another participant listed a specific program unique to their school as the main reason she has stayed in the Anderson District.

The final theme from teachers who indicated they had thought about leaving the district related to professional development, but it was not as predominant as previous themes discussed. The Teacher 101 program was listed specifically along with general comments about many professional development opportunities. One novice teacher supported this theme through stating "it is an excellent place to gain experience and to be equipped as a beginning educator" (Q37, response 1).

Reasons to leave the district. To take a deeper perspective on why teachers have considered leaving the Anderson School District, the teachers who agreed they had considered leaving were asked an additional question. The question asked them to explain specifically what was attractive about other districts or job fields. Table 10 displays an overview of the themes regarding what these teachers found attractive about leaving the district.

Table 10

Themes for what was Attractive About Other Job Fields or Districts*

	Other Job Fields	Other Districts
Predominant	• Natural Change	• Salary Levels
	• Job Satisfaction	• Desire Smaller District
Minor	(none)	• Relationships

Note. *Question was only asked to the Agreed Group for item "I have considered leaving the Anderson District."

There were only a few comments specifically about consideration of other job fields and resulted in two themes. The first theme dealt with natural change. Responses included a goal to be in publishing, change to utilize current degrees, and one teacher indicated "I am a person who truly likes to change things up and would honestly move every five years just for a new experience if reality would let me" (Q38, response 21). The second theme centered on job satisfaction qualities. Comments included desiring a job with more recognition, more flexibility, opportunities for advancement, and less stress.

In considering what was attractive about other districts, two prevalent themes emerged. The first theme was salary levels and was mentioned numerous times. The second theme was the desire to teach in a smaller school district. The political landscape was one sub-theme evident in the comments. Smaller districts were viewed as having fewer political struggles and more flexibility. One teacher indicated they desired a district with "less political structure…in a smaller district [it] takes less time to enact needed changes" (Q38, response 2). Another component of this theme was the environment of smaller districts. Concepts included closer faculties, smaller class sizes, and feeling apart of the district. One teacher said "in [the Anderson School District] there are so many different schools, it's hard for all of them to be on the same page" (Q38, response 11). In support, another novice teacher replied, "Sometimes it is easy to get 'lost' in the [Anderson School District] because it is just so big…it would be nice to be able to put faces with names. That's really hard to do in [Anderson]" (Q38, response 35).

A third theme that emerged about what was attractive about other districts was relationships with people; however, it should be noted this theme was not as prevalent as the other themes presented. Comments included desiring stronger collaboration, support

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from colleagues and administration, stronger parental involvement, and a student body

that was easier to work with. A few comments stemmed from apparent negative

experiences with peers. For example, one teacher indicated they wanted to work with

people who were not "devious and lie" (Q38, response 6).

In conclusion to this question, it should be noted only one responder indicated a

frustration with the professional development or support for new teachers provided by the

Anderson School District. This individual did not participate in Teacher 101. Conversely,

there was one novice teacher who stated Teacher 101 was one reason they wanted to go

to another district; however, they did not offer any further explanation as to why.

Beneficial supports. The FSMI-R also asked novice teachers to give their

perspective on which supports, provided by the Anderson School District, were most

beneficial to them. The themes, which emerged from the data, were identical from both

groups of teachers and held the same weight with both groups. The first theme was

professional development and the second was relationships with staff. The third theme

was not as predominant as the first two; however, building administration did surface as a

theme. Table 11 displays an overview of the themes for beneficial supports.

Table 11

Themes for Beneficial Supports

	Agreed Group*	Disagreed Group*
Predominate Themes	• Professional Development • Relationships with Colleagues	• Professional Development • Relationships with Colleagues
Minor Themes	• Administrative Support	• Administrative Support

Note: *Groups determined by answers to "I have considered leaving the Anderson District."

The professional development offered by the Anderson School District was an overwhelming theme revealed in the data as a beneficial support from both teachers who had and had not considered leaving the district. Although this is a qualitative piece of the study, it is noteworthy that over half the responses specifically mentioned the Teacher 101 program or Teacher 101 coach as being a beneficial support. Besides general professional development opportunities, other specific approaches were listed. These included mentoring, whole faculty study groups, Title I literacy and math coaches, and days for professional development. One novice teacher explained the Anderson District has "offered wonderful professional learning opportunities in many diverse areas of education. I have eagerly attended several opportunities (both in [Anderson] and out of state) and have been so excited to learn more" (Q40, response 21). While others wrote passionately about the Teacher 101 program, for example, one teacher wrote "[Teacher 101] has definitely been career saving" (Q40, response 28). Some participants specifically listed names of coaches and portions of Teacher 101 they found valuable. One teacher indicated, "I had a wonderful, empathetic coach who was there whenever I

needed her. It was also nice to meet a few times a year with other first year teachers"

(Q40, response 10).

The second theme that emerged, as a beneficial support, was the relationships

built with colleagues. Collaboration, working as a team, and feeling supported by fellow

teachers were concepts repeated throughout the data. Responses included these supports

at the building and with other teachers throughout the district. A few teachers indicated

their appreciation of support from veteran teachers, as one novice teacher stated, "The

veteran teachers around me have been most helpful and go out of their way to give

encouragement. I feel very helped in all ways" (Q40, response 16).

The final theme, although not as prevalent, was support from building level

administration. Teachers described their administrators as supportive and willing to

schedule collaborative time during the day. One teacher explained the "one on one

relationship I have with my principal is incredible and I have learned so much from her"

(Q40, response 36).

Additional supports. The final aspect of research question three explored what

supports novice teachers in the Anderson School District believe would be of benefit to

novice teachers. Themes were parallel between both groups of teachers who indicated

they had and had not considered leaving the district. The two predominant themes were

time to collaborate and professional development. A third theme was the desire to be

financially reimbursed for continuing education. Next, the two predominant themes of

time to collaborate and professional development will be discussed. Table 12 displays an

overview of the themes for desired supports.

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Table 12

Themes for Desired Supports

	Agreed Group*	Disagreed Group*
Predominant Themes	• Time for Collaboration • Professional Development	• Time for Collaboration • Professional Development
Minor Themes	• Reimbursement for Continuing Education	• Reimbursement for Continuing Education

Note:*Groups determined by answer to "I have considered leaving the Anderson School District."

Teachers in both groups believed they would benefit from various forms of more time to collaborate. Teachers mentioned time to collaborate with teachers across the district in their specialized area they teach, specifically mentioned were special education areas and early childhood programs. There was also mention of more time in buildings for grade level collaboration and additional time with literacy coaches. The final concept with time involved having time to work with peers to assist in meeting the diverse needs of students.

The second theme consisted of ideas for professional development. Responses included general topics and suggestions clearly related to the respondent's area of teaching. Desired concepts included working with at risk students, Reading Recovery training, assessments, and the specific content areas of science and social studies. Participants in the study mentioned training for fields of special education, early childhood programs, and literacy training for non Title I sites explicitly. A few novice teachers also expressed a desire to attend professional development opportunities outside of the district.

Summary

This chapter presented the data analysis for the study. The research questions, population and sample, and data collection instruments were first reviewed. Following was a detailed description of the data gathered to answer each of the three research questions.

Research question one explored the student achievement of students whose teachers had and had not participated in Teacher 101. Although the growth means of the Teacher 101 group were higher than the non Teacher 101 group, there was no significant difference found in reading or math achievement between the groups. Therefore, the null hypothesis was retained for reading and math achievement.

Research question two investigated Cognitive Coaching's five states of mind through the FSMI-R. The Teacher 101 group had higher means for efficacy, flexibility, interdependence, and craftsmanship. The non Teacher 101 group had a higher mean on the consciousness state of mind. While the differences in means were present, there was no significant difference found between the two groups for any of the five states of mind. Consequently the null hypothesis was retained for all of the five states of mind.

Research question three delved into the novice teachers' perspectives on their consideration for leaving the district, supports they viewed as beneficial, and supports they believe would be supportive to them. Two groups were compared, teachers who have considered leaving the district and teachers who have not considered leaving the district. Although more participants indicated they had not considered leaving the district, the two groups were very comparable to each other in demographics.

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There were common themes between the two groups of teachers, although the themes' prevalence varied between the two groups. There was one uncommon theme between the two groups of teachers. Common emerging themes of why teachers chose to stay in the Anderson School District included relationships, supports and resources, school environment, location of the district, and feelings related to their job. The uncommon theme was only found in the group of teachers who had not considered leaving the district. This theme revolved around the belief of the district having focused high expectations for its students.

Teachers who indicated they had considered leaving the district were asked to reveal what was attractive about other districts or job fields. With regards to other career fields, themes of natural change and different work environment surfaced. In consideration of other districts, the themes of salary and desire to teach in a smaller district were prevalent. Relationships also emerged as a theme, although not as heavily weighted as the previous themes.

Both groups of teachers were asked to describe the supports provided by the Anderson School District they perceived having been beneficial to them. The themes that emerged from both groups were parallel in concept and prevalence. The major themes included professional development and relationships with staff. A third, but minor theme, was relationships with and support from the building administration.

The final aspect of question three required participants to offer suggestions on desired supports. Again, the themes between the groups were identical in topic and prevalence. The two predominant themes were time to collaborate and professional development. A third theme included financial reimbursement for continuing education.

Chapter five will include additional discussion pertinent to the study. Limitations, implications for practice, and recommendations for future research will also be explored. The appendix follows and contains the FSMI-R, email correspondence, and informed consent documents.

CHAPTER FIVE

SUMMARY AND RECOMMENDATIONS

Introduction

Every fall, parents across the nation send their child off to their first day of a new school year. There are many questions entering their mind about what the year will bring and who will be their child's teacher. Will their child have the highest quality teacher who engages and motivates their child beyond their capabilities? Will the teacher know how to meet their child's unique needs? Or, will their child's teacher be focused on mere survival in the beginning of their teaching career and contemplating other jobs the first week of school? Although they may or may not have a formal understanding of the educational system, parents still understand the pivotal centerpiece in their child's education is the classroom teacher.

The landscape of American schools has changed drastically over the past few decades and teachers are exiting in masses. As the NCTAF (2003, p. 21) asserted, "It's as if we are pouring teachers into a bucket with a fist-sized hole in the bottom." Attrition rates, of teachers within their first five years, are as high as 50% in some districts (Ingersoll & Smith; Darling-Hammond, 2003). This staggering rate combined with a projected increase of classroom teachers to meet the needs of increased birthrate, immigration, and class size reduction creates a bleak outlook for educational administrators. Research has indicated this trend can be altered through the use of effective teacher induction programs (Darling-Hammond, 2000, 2005; Fulton, Yoon, & Lee, 2005; Ingersoll & Smith, 2003, 2004; McCann, Johannessen, & Ricca, 2005; NCTAF, 2003; NRTA, 2003; Wong, 2004).

The Anderson School District was experiencing a 30% teacher attrition rate prior to the creation and implementation of a comprehensive five-year teacher induction program titled Teacher 101. During the first three years of implementation, their attrition rate averaged fourteen percent. This was outstanding progress towards their goal; however, district leadership sought to understand if the program, even in its infancy, had impacted student achievement. Additionally, Cognitive Coaching was a centerpiece of the program, and they were interested in determining the effects it was having on novice teachers' states of mind.

The remainder of this chapter will review the purpose and design of the study. Findings will be shared followed by the limitations. Then implications for practice and recommendations for future research will be discussed.

Purpose of the Study

The purpose of the study was to assist the Anderson School District in evaluating their teacher induction program. Although the Teacher 101 program had only completed three years of implementation, it was desired to determine if there had been an impact on student achievement. The study also explored the effect of Cognitive Coaching on the development of the five states of mind between the participants in Teacher 101 and beginning teachers who were not eligible for participation.

Design and Procedures

The study was designed as a utilization-focused evaluation (Patton, 1997) where the researcher collaborated closely with district leadership of the Anderson School District in efforts to create a study to answer questions they desired to understand in regards to the Teacher 101 program. Continuous contact with the district leadership

through the design process ensured the direction of the study would provide the desired information and assist with program improvement. The study utilized primarily quantitative methods, but did contain a qualitative element to provide deeper insight than quantitative methods allow. This section will provide a brief review of the procedures used to answer each research question.

Ultimately, the goal for all efforts in professional development or induction programs is increased student achievement. The focus of research question one was to determine if the Teacher 101 program has had an effect on student achievement. To examine student achievement, pair-matches were created based on teacher's grade taught, years of experience, and if their school was Title I or not. To measure the effects of the Teacher 101 program on the student level, the study used district assessments given in reading and mathematics. Because the assessments were administered at the beginning and end of the year, a growth score was calculated for each student and an independent samples t-test was utilized on the beginning of the year scores to determine similarity of the groups. Similarity was confirmed and an independent samples t-test was employed on the growth scores to determine if a significant difference existed.

With Cognitive Coaching as a main thread of Teacher 101, the district leaders wanted to understand how it had affected teacher's thinking of those who had participated in Teacher 101 compared with teachers who had not participated in Teacher 101. The FSMI-R was adapted from Ushijima's (1996) work in developing an instrument to gauge the five states of mind. This self-reporting instrument was administered in the form of an online survey. All elementary novice teachers in the Anderson School District were invited to participate in the study. From the results, a subscale score was created for

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each participant for each of the five states of mind. An independent samples *t*-test was calculated to determine if there was a significant difference on any of the states of mind between the teachers who had and had not participated in Teacher 101.

The final portion of the FSMI-R asked the respondents to share if they had considered leaving the district. Those that indicated they had considered leaving were asked to share what was attractive about other districts. All participants were asked to share what supports had been beneficial to them and what supports they believe would have been desired. The qualitative data was analyzed using a constant comparative method (Merriam, 1998). During this process themes emerged from the data, which provided deeper insight into the perspectives of the novice teachers and their experiences in the Anderson School District. The following section will provide further discussion on the results of the study.

Findings of the Study

The study sought to assist the Anderson School District in answering three research questions. The focus of the first question was to determine if there was a difference in student achievement between teachers who had participated in Teacher 101 and those teachers who had not participated in Teacher 101. The second research question examined Cognitive Coaching's five states of mind to determine if differences existed between Teacher who had and had not participated in Teacher 101. The final question centered on understanding novice teachers' perspective on staying with the district, supports they found beneficial, and supports they wish would have been in place. The findings for each of these questions will be presented separately.

To answer research question one, five pair-matches were created to compare the student achievement between teachers who had participated in Teacher 101 and those who had not participated. The achievement results of 201 students were compared in reading and mathematics. The following conclusions were made.

It was found that no significant difference in reading achievement existed between elementary students whose teachers had and had not participated in Teacher 101. Based on this data, hypothesis 2 is rejected and the null hypothesis was retained.

It was found that no significant difference in mathematics achievement existed between elementary students whose teachers had and had not participated in Teacher 101. However, there was a more noticeable difference in the gains for math of the Teacher 101 group over the non Teacher 101 group. Based on this data, hypothesis 1 is rejected and the null hypothesis was retained.

The second research question was explored through the use of the FSMI-R. All novice elementary teachers in the Anderson School District were invited for participation. Eighty-nine teachers responded to the online survey and the following results were concluded.

It was found that no significant difference existed in the state of mind of efficacy, as reported on the FSMI-R, between teachers who had participated in Teacher 101 and those who had not. Based on this data, hypothesis 2 is rejected and the null hypothesis was retained.

It was found that no significant difference existed in the state of mind of flexibility, as reported on the FSMI-R, between teachers who had participated in Teacher

101 and those who had not. Based on this data, hypothesis 2 is rejected and the null hypothesis was retained.

It was found that no significant difference existed in the state of mind of interdependence, as reported on the FSMI-R, between teachers who had participated in Teacher 101 and those who had not. Based on this data, hypothesis 2 is rejected and the null hypothesis was retained.

It was found that no significant difference existed in the state of mind of consciousness, as reported on the FSMI-R, between teachers who had participated in Teacher 101 and those who had not. Based on this data, hypothesis 2 is rejected and the null hypothesis was retained.

It was found that no significant difference existed in the state of mind of craftsmanship, as reported on the FSMI-R, between teachers who had participated in Teacher 101 and those who had not. Based on this data, hypothesis 2 is rejected and the null hypothesis was retained.

Research question three explored the perspectives of elementary novice teachers through a qualitative approach. This allowed the research to examine the participants' perspectives on their intentions to leave the district, why they would stay or leave, what supports they viewed as beneficial, and what supports they believe would have assisted them in professional growth.

The initial question about intentions on leaving found 55.8% of the survey participants indicated they had not considered leaving the district and 44.2% indicated they had considered leaving the Anderson School District. The two groups of teachers were similar in composition of gender, years of teacher experience, participation in

Teacher 101, and teacher in Title I and non Title I schools. The novice teachers who had indicated they had considered leaving the district were asked to explain what was attractive about other job fields or school districts.

Themes emerged regarding other job fields and appeal of other school districts. In considering other job fields, a theme of natural change occurred in the data. Individuals indicated they enjoyed change or a change in jobs would meet personal goals. Their responses did not indicate a negative experience with education. In contrast, a theme of job satisfaction and the belief the work environment of other fields would provide less stress, more flexibility, more opportunities for advancement, and more recognition was also evident it the responses.

In considering the appeal of other school districts, two main themes and a third minor theme were revealed. Monetary factors such as salary and benefits were mentioned numerous times indicating the belief other districts compensate their teachers better than the Anderson School District. The second theme revolved around smaller school districts. Smaller districts were perceived as being less political, more positive environment, and easier to develop a sense of belonging. A minor theme focused on relationships with building staff. Responders indicated smaller districts had stronger collaboration and support from parents and administration.

Teachers were also asked to explain what keeps them in the Anderson School District. There were similar themes from both groups of teachers, those who had considered leaving and those who had not; however, the weight of the themes varied between the groups. Teachers who had not considered leaving the district named relationships as a major impact on their desire to stay as well as the supports and

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resources available to them. Relationships included everyone from students to district

administration. Supports and resources includes a wide rage of supports but was heavily

weighted with professional development supports offered by the district. Three minor

themes were discovered in the data as well. First, the teaching environment in their

school surfaced. Second, the location of the district was revealed as a reason why

individuals chose to stay in the district. A third minor theme was the belief the Anderson

School District was focused on students and maintained high expectations for students. It

should be noted this theme was not seen in any responses of those who indicated they had

considered leaving the district.

     Teachers who had considered leaving the district had similar themes as those who

had not thought about leaving but had different levels of prevalence. For this group the

predominant themes revolved around location and salary packages. Two moderate

themes were relationships and school environment. As with the first group, novice

teachers listed students, administrators, and supportive peers as reasons why they had not

left the Anderson School District. In comments about individual school environment,

responses were very specific to the qualities they enjoyed about their school but did not

see reflected in the district. A final theme, with the lowest prevalence, was related to

professional development. Teacher 101 was specifically given as well as other

opportunities provided by the district. There was an appreciation expressed by the

teachers for the opportunities.

     In reviewing which supports the novice teachers thought were beneficial, the

themes, which emerged in the data, were parallel between the two groups. The first

theme was overwhelmingly the most predominant and centered on the professional

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development supports. Over half of the respondents mentioned aspects of the Teacher 101 program as being a positive support for them. In addition to general comments, specific supports were listed as well. The second theme was the development of collaborative relationships with peers. The final theme, albeit minor, was the support of the building principal.

As with the supports they found beneficial, the themes that surfaced in the responses of both groups were identical when teachers explained what supports they believe would have been beneficial to them. Two major themes were drawn from the data. The first theme was more time for collaboration, and the second theme was specific professional development opportunities. Time for collaboration included ideas of more time for unique specialty areas, such as early childhood teachers and special education areas, to meet together with other like teachers in the district. There were also thoughts of more time with building grade level teams and literacy coaches. Professional Development topics included general concepts and specific topics related to unique teaching expertise. A minor theme was the desire to be reimbursed for continuing education costs.

Limitations

As with many studies, there are limitations to be taken into consideration and managed. Following the limitations, there is a brief review of the steps taken to minimize the effects of the limitations.

1. Due to the preexisting determination of which teachers participate in Teacher 101 by the district, the study was limited to using a quasi-experimental approach.

2. Due to the study being limited to one mid western district and its unique

   teacher induction program, the results are not generalizable to other districts or

   programs.

3. Due to the student achievement data being limited to elementary students, the

   results should not be generalized to secondary students.

4. Due to the survey being administered to elementary teachers, the results should

   not be generalized to secondary teachers.

5. The assessment of teacher's five states of mind was limited to self-reported

   perceptual data.

6. Due to the population of the study working in many different buildings, the

   researcher was unable to control for school environmental factors.

7. Due to the program being in its initial years of implementation, the study was

   limited in the number of pair-matches that could be created.

As the study was designed, the following efforts were made to minimize the

limitations of the study. In considering the student achievement results, the small sample

size of available pair-matches was increased through the use of student level data. This

allowed for the comparison of 201 students' growth achievement in reading and

mathematics that increased the sample size considerably. Because each teacher has a

unique population of students, an independent samples t-test was conducted on the

students beginning of the year scores to ensure the groups were similar and appropriate

for comparison. Growth scores were calculated for each student instead of using end of

year scores. This allowed the study to account for differences that existed in each group's

beginning means and only consider the growth the students made throughout the year.

Similar groups were also maintained by considering the schools status as a Title I or non Title I school when creating the pair matches.

Design controls were taken into consideration during the development of the teacher survey. The autonomy of the survey allowed for responders to be honest without fear of repercussions. Demographic data was collected to determine if there was representation from various groups within the district. A summated rating scale (Johnson & Christensen, 2000) was utilized in the survey so the participants' subscale for each of the five states of mind was based on multiple questions.

Implications for Practice

In the next decade, the demand for teachers will be amplified due to an increase in birthrates, an increase in immigration, a peek number of teachers eligible for retirement, and the pressures of school reform in meeting standards of reducing class sizes (Algozzine, Gretes, Queen, & Cowan-Hathcock, 2007; Darling Hammond, 2000; Fiore & Whitaker, 2005). These projections coupled with current teacher attrition rates cannot be ignored. Educational administrators are concerned at the prospect of how this combination of factors will affect the quality of teachers in the classroom. Districts looking to correct the problem have implemented comprehensive induction programs in efforts to maintain quality teachers within their first five years of teaching (Darling Hammond; Fulton, Yoon, & Lee, 2005; Ingersoll & Smith, 2004; McCann, Johannessen, & Ricca, 2005; NCTAF, 2003; NRTA, 2003; Wong, 2004). This study has not only assisted a district in evaluating their induction program through different lenses than previously done, it also adds to the collective knowledge of the perspective of novice teachers and their thoughts about the education profession.

One of the goals of the Teacher 101 program was to increase teacher retention within the district, and this goal has been met during the first three years of implementation. Another goal, and a focus of the study, was to increase student achievement. Although the student achievement means for reading and math were higher for the Teacher 101group, they were not significantly different at this time. It should also be noted the noticeable difference in the math growth scores of the Teacher 101 group over the non Teacher 101 group. The results indicated a stronger difference in mathematics growth over reading growth. The district should continue to monitor and determine if this specific pattern holds true as more data are available. Overall, this should be an encouragement to the district and a consideration for future research as the program matures. Literature on effective organizations indicated the needs for continuous assessments of programs and changes in environment to ensure current practices are meeting the needs of its stakeholders (Ganser, 2002; Nonaka & Takeuchi, 1995; Patton, 1997; York-Barr, Sommers, Ghere, & Montie, 2001).

The qualitative data provided on the final portion of the FSMI-R afforded many insights, which relate to future practices not only for the Anderson School District, but also for other districts looking to improve their teacher retention. The following paragraphs will present implications for the Anderson School District followed by general implications for districts and building level administration.

The data provided some insights specific to gaps that may exist within the professional development framework of the Anderson School District. Two particular areas of teaching were repeated in the data as needing attention. The areas of elementary special education and early childhood program surfaced as not providing the same

extensive support as general classroom teachers. It is recommended the Anderson School District conduct a deeper analysis into these areas and how they can meet the needs of novice teachers in these specialty areas. Literature supports this recommendation because districts must understand the unique needs of their situation to provide effective supports to their teachers (Efers, Plecki, & Knapp, 2006; Ganser, 2002). Although this gap was apparent, overall the study reinforced the district's efforts in providing support to novice teachers. It is recommend the Anderson School District continue to build upon the Teacher 101 foundation they have created while making adjustments to meet specific needs of teachers who teach in specialty areas.

The study provided information relevant to many school districts that mirrored current research on teacher retention. If districts are to retain staff from embarking to other school districts or other occupations, competitive salaries and benefits should be maintained (Darling-Hammond, 2000; Efers, Plecki, & Knapp, 2006; Ingersoll & Smith, 2003; NRTA, 2003). Repeatedly in the data salary and other financial concepts were mentioned both as reasons to stay and leave the district. This highlights the importance of maintaining competitive salary packages. It is recommended for districts to routinely analyze their salary packages with near by districts and the local job market to ensure they are maximizing their competitiveness. Furthermore, as suggested by Darling-Hammond, it is recommended for individuals and districts to support state-wide efforts to establish minimum salary base lines which are supplemented for poorer districts through supplemental state funding. This would level the salary playing field between districts.

The second recommendation for districts is to understand the needs of novice teachers and to provide focused support. Literature revealed novice teachers believed the

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most valuable induction activities were focused on specific aspects of teaching (Algozzine, Gretes, Queen, & Cowan-Hathcock, 2007; Nielson, Barry, & Addison, 2006). Besides consulting literature on novice teachers, districts should work with their own teachers to understand and meet the unique needs apparent in their district (Ganser, 2002). A buttressed by Efers, Plecki, and Knapp (2006), high teacher attrition rates could be a sign of deficiencies within the district. Therefore, it is recommended districts develop practices for gathering continuous feedback from novice teachers which should be examined to ensure the support offered meets the changing needs of novice teachers and to highlight any gaps within the system.

The final recommendations are for building level administrators. Reoccurring themes in the data illuminated the importance of school environment, relationships, and the support of principals for novice teachers; consequently all of these factors were indicated in the literature as reasons teachers left the teaching profession (Darling-Hammond, 2003; Efers, Plecki, & Knapp, 2006; Fiore & Whitaker, 2005; Johnson & Birkeland, 2003; McCann, Johannessen, & Ricca, 2005; Nieto, 2003; NRTA, 2003; Protheroe, 2006; Williams, 2003). Principals are instrumental in fostering a collegial environment in their school (Fiore & Whitaker). As evident in the data of this study, novice teachers desired a school environment that was positive and supportive. Closely connected to school environment is the facilitation of relationships. Although many relationships will occur naturally, the building principal can put structures in place to facilitate the developmental relationships among novice teachers and veteran staff (Efers, Plecki, & Knapp; Fiore & Whitaker; NRTA; Protheroe).

Principals can also model collaborative relationships and personally develop a relationship with each novice teacher. The novice teachers in the study expressed their appreciation and value of personal relationships and support they developed with their principal; therefore, it is recommended for the district to share with principals the value of these relationships and strategies for developing effective relationships.

This section highlighted some thoughts of the researcher as they relate to recommendations for practice. Concepts shared were specific for the Anderson School District but also included ideas from the study that are applicable to any school setting. The next section will describe recommendations for future research.

<center>*Recommendations for Future Research*</center>

In the current state of school reform, continuous improvement is on the forefront of many educators' minds. Additionally, the conclusion of research often leaves the researcher with more questions than when they started. This section is dedicated to exploring recommendations for future research as they relate to the Anderson School District's Teacher 101 induction program.

The study provided a base line of comparable student achievement data between teachers who had and had not participated in Teacher 101. The study was limited in scope for this portion of the study because of the recent implementation of the Teacher 101 program. One recommendation for future research is to repeat the analysis of pair matches in future years. As the program matures in implementation more pair matches will be available for comparison, which will make more student data obtainable for analysis. With the difference in mathematic growth noticeable and on the brink of significance, more data would further illuminate if a difference in student achievement

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exists between the two groups of teachers. This type of continued analysis will not only provide the district with trend data, but will allow them to monitor their first goal of the Teacher 101 program to increase student achievement. Furthermore, a recommendation is also made to replicate the study at the middle school and high school level. Coupled with the elementary study, this additional study would provide the district insight into how the Teacher 101 program is impacting student achievement across all grade levels. Finally, the district should consider comparison of student scores against national norms for reading and mathematics to determine how the district's novice teachers compare at the national average.

The second set of recommendations involves continuing to monitor the effects of Cognitive Coaching through the five states of mind. As suggested with the student achievement, because the program is still in its infancy, the study should be repeated with future novice teachers in the district. Furthermore, it is recommended to strengthen this research through the addition of input from other individuals who work with the novice teachers and can provide data beyond the self-reporting on the FSMI-R. These individuals may include principals, fellow teachers, or Teacher 101 coaches who work closely with novice teachers.

Another recommendation for consideration would be to compare the novice teachers' states of mind to more veteran teachers to determine if differences exist between the two groups. Further study may also have the same group of novice teachers repeat the survey to see if there are difference in their self concept or to administer the instrument in the first half of the year to gauge if the additional support is making an impact during the crucial first weeks of school.

It is recommended the Anderson School District not only continue their practice of gathering feedback from novice elementary teacher who participate in Teacher 101, but expand their feedback gathering to teachers who have not participated in Teacher 101. This information would assist district leaders in identifying gaps and current needs of all novice teachers within the district.

Conclusion

American school districts are facing realities of loosing up to 50% of their teachers within their first five years of teaching (Darling-Hammond, 2003; Ingersoll & Smith, 2004). Not only are districts confronted with the dilemma of finding quality teachers, they also must absorb the costs of continually training new teachers, and maintaining high levels of student achievement with inexperienced staff (Darling-Hammond; Fiore & Whitaker, 2005; Ingersoll & Smith; Wong, 2004). Research has buttressed repeatedly that students are the ones who suffer the most from high rates of teacher turnover (Darling-Hammond; Ingersoll & Smith). Effective induction programs can assist to reverse these trends.

The literature indicated the most effective induction programs were well-planned, comprehensive, systematic approaches, which were long term in scope (Darling-Hammond, 2000, 2005; Fulton, Yoon, & Lee, 2005; Ingersoll & Smith; McCann, Johannessen, & Ricca, 2005; NCTAF; NRTA, 2003; Wong). Anderson School District designed their Teacher 101 program based on research-based methods of effective teacher induction and professional development. One foundational component for Teacher 101 was coaches trained in Cognitive Coaching. During the inaugural years of implementation, the district experienced a decrease in their teacher attrition rate from

30% to fourteen percent. This study provided the district with further support in determining the impacts the Teacher 101 program was having on student achievement, novice teacher's five states of mind, and their intentions on staying or leaving the district.

Although there were no significant differences established, results were encouraging in the student achievement data as the growth means were greater for students whose teachers had participated in Teacher 101 compared to students whose teacher had not participated in Teacher 101. This is especially evident in the math growth scores. As demonstrated through the analysis of the FSMI-R, there were not significant differences in Cognitive Coaching's five states of mind of novice teachers who had participated in Teacher 101 compared with novice teacher who had not participated. However, the final portion provided insight into the thinking of the novice teachers and provided some reflection points for the district as they seek to improve their supports for novice teachers.

The future of American education will be in the hands of the novice teachers currently coming into the field. It is the responsibility of district and building administrators to provide the supports necessary to facilitate the growth and development of novice teachers into master teachers. This will require the allocation of funding towards effective induction programs along with conscious efforts to develop strong, collaborative relationships with novice teachers to support them in their first few years of teaching. As previously stated in the literature, it is imperative educational leaders "understand this fundamental concept – that the quality of the people will ultimately determine the quality of the organization - then we must also recognize the converse. The

fastest way for a school to decline is to lose its best teachers" (Fiore & Whitaker, 2005, p.8).

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Appendix A

FSMI-R with informed consent

This information will be posted at the beginning of the survey.

Dear research participant:

Thank you for considering participation in a study of teacher retention. This study is part of my doctoral studies in Educational Leadership and Policy Analysis at University of Missouri.

The purpose of this study is to determine the impacts of supports or beginning teachers. This information will benefit the Anderson School District as they work to continual improve the induction programs and professional development opportunities for beginning teachers. Future teachers to the Anderson School District will also benefit from the information as the data will be used to make decisions about professional development for beginning teachers.

Before you make a final decision about participation, please read the following about how your input will be used and how your rights as a participant will be protected:

- Participation in the study is completely voluntary. You may stop participating at any point without penalty.
- You need not answer all of the questions.
- Your answers will be kept anonymous. Results will be presented to others in summary form only, without names or other identifying information.
- Your participation will take approximately 10-15 minutes.

This project follows ethical guidelines in the use of human subjects and adequately safeguards the subject's privacy, welfare, civil liberties, and rights. These steps will ensure there are no foreseeable risks to your participation in the study. The project is being supervised by Dr. Cindy MacGregor, Associate Professor, Educational Administration, Missouri State University (417-836-6046). The University of Missouri Institutional Review Board has also approved the research. You may contact the University of Missouri IRB at:

Campus Institutional Review Board
483 McReynolds
University of Missouri
Columbia, MO 65211
(573) 882-9585 phone
(573) 884-0663 fax
umcresearchcirb@missouri.edu

If at this point you are still interested in participating and assisting with this important research project please continue on to the survey.. You can contact me at 833-8795 or email: jbagwell@spsmail.org if you have questions or concerns about your participation. Thank you very much for your time and consideration.

Sincerely,

Janell Bagwell

Continue on to the Survey
Five States of Mind Inventory – R

Demographic Data

1. Gender -   Male   Female

2. Total years of classroom teaching experience (include this school year) –
                        1   2   3   4

5. What grade do you teach?

         K   SPED

         1   Art

         2   Music

         3   PE

         4   Other

         5

4. Is your school classified as Title I?Yes   No

5. Did you participate in the Teacher 101 induction program?   Yes   No

Five States of Mind Inventory – R

Part I

Rate how true the following statements are by marking the attitude that best applies to you in your school work setting. In this activity there is no such thing as a right or wrong answer.

1. In my classroom, I am aware of what I'm going to do before I do it.

Strongly Disagree   Disagree   Somewhat Disagree   Somewhat Agree   Agree   Strongly Agree

2. I find ways to get better at what I do in my classroom.

Strongly Disagree   Disagree   Somewhat Disagree   Somewhat Agree   Agree   Strongly Agree

3. I am a team player in my work place.

Strongly Disagree   Disagree   Somewhat Disagree   Somewhat Agree   Agree   Strongly Agree

4. I am getting better and better every day at my work.

Strongly Disagree   Disagree   Somewhat Disagree   Somewhat Agree   Agree   Strongly Agree

5. I can make things happen in my classroom.

Strongly Disagree   Disagree   Somewhat Disagree   Somewhat Agree   Agree   Strongly Agree

6. I am aware of what I'm doing in my classroom.

Strongly Disagree   Disagree   Somewhat Disagree   Somewhat Agree   Agree   Strongly Agree

7. With enough effort, I can do anything in my classroom.

Strongly Disagree   Disagree   Somewhat Disagree   Somewhat Agree   Agree   Strongly Agree

8. I am comfortable not knowing what to expect in my work place.

Strongly Disagree   Disagree   Somewhat Disagree   Somewhat Agree   Agree   Strongly Agree

9. It is better for me to work alone than in a group at my school.

Strongly Disagree   Disagree   Somewhat Disagree   Somewhat Agree   Agree   Strongly Agree

10. There is a connection between how hard I try and how well I do in my classroom.

Strongly Disagree   Disagree   Somewhat Disagree   Somewhat Agree   Agree   Strongly Agree

11. There is one way to solve a problem in my work setting.

Strongly Disagree   Disagree   Somewhat Disagree   Somewhat Agree   Agree   Strongly Agree

12. I think about my actions after I've done something in my classroom.

Strongly Disagree   Disagree   Somewhat Disagree   Somewhat Agree   Agree   Strongly Agree

13. It is rewarding to accomplish a task as a team in my school.

Strongly Disagree   Disagree   Somewhat Disagree   Somewhat Agree   Agree   Strongly Agree

14. In my school, it is better to think of one way to do something rather than consider several ways that might work.

Strongly Disagree   Disagree   Somewhat Disagree   Somewhat Agree   Agree   Strongly Agree

15. I practice to be better at things that I do in my classroom.

Strongly Disagree   Disagree   Somewhat Disagree   Somewhat Agree   Agree   Strongly Agree

Five States of Mind Inventory – R

Part II

Click the "x" between the two words on each line that best describes you in your school work setting. There is no right or wrong answer.

At work, I am best described as…

16. Firm	x	x	x	x	x	x	Flexible
17. Unaware	x	x	x	x	x	x	Aware
18. Precise	x	x	x	x	x	x	Imprecise
19. Cooperative	x	x	x	x	x	x	Uncooperative
20. Helpless	x	x	x	x	x	x	In Control
21. Able to adjust	x	x	x	x	x	x	Set in my ways
22. Independent	x	x	x	x	x	x	Collaborative
23. Adaptable	x	x	x	x	x	x	Like things to stay the same
24. Uninformed	x	x	x	x	x	x	Informed
25. Inaccurate	x	x	x	x	x	x	Accurate
26. Incompatible	x	x	x	x	x	x	Compatible
27. Effective	x	x	x	x	x	x	Powerless
28. Conscious	x	x	x	x	x	x	Unconscious
29. Thorough	x	x	x	x	x	x	Incomplete
30. Confident	x	x	x	x	x	x	Insecure

Final Questions

1. Rate your agreement with the following statement:

I have considered leaving Anderson School District.

Strongly Disagree   Disagree Somewhat Disagree Somewhat Agree   Agree   Strongly Agree

If participant answers "Strongly Agree" "Agree" or "Somewhat Agree" they will be prompted to answer the following questions
- What specifically keeps you in the Anderson School District?
- What is attractive about other districts or job fields?

If participant answers: " Strongly Disagree" "Disagree" or "Somewhat Disagree" they will be prompted to answer the following questions

- What specifically keeps you in Anderson School District?

2. What specific supports have been beneficial to you in your professional growth?

3. What specific supports do you wish were provided to assist you in professional growth?

Appendix B

Email to subjects asking for participation.

Dear Anderson School District Teacher:

I am working in collaboration with the Anderson School District Professional Development Office to conduct research on teacher retention as part of my doctorate program through University of Missouri. You have been identified for the study because you are a teacher with less than five years of teaching experience. Your input is valued to help us gain insight into your experiences here in Anderson district and help shape induction programs for future beginning teachers. The link below is an online survey that will take 10-15 minutes to complete. Participation is voluntary and all responses are anonymous.

More information about the study is provided at the beginning of the survey, but please feel free to contact me by phone (523-4300) or by email (jbagwell@spsmail.org) if you have further questions.

LINK TO SURVEY

Thank you,
Janell Bagwell

VITA

Janell R. Bagwell was born on December 10, 1972 in Springfield, Missouri to James D. and Sybil K. Osborn. She grew up in the Springfield RXII school district and graduated from Kickapoo High School in 1991. In Fall of 1995 she graduated with a Bachelor of Science degree in Elementary Education from Evangel University (formerly known as Evangel College). She earned a Masters of Arts Degree in Educational Administration in 2003 from Missouri State University (formerly known as Southwest Missouri Sate University). In 2008, she earned a Doctorate in Education Department of Educational Leadership and Policy Analysis from the University of Missouri, Colombia.

Janell's total work experience was in the Springfield Public School District in Missouri. Initially she was employed as a technology teacher, but within a month was hired to teach fifth grade in a Title I school. After teaching six years she entered administration as an Assistant to the Principal, a position which she held for two years. Next, she was an Assistant Principal in a K-8 building for one year. Following she was, and currently is, the Principal of Mark Twain Elementary.