

2017

An Examination of the Impact of Induction on Teacher Efficacy

Julie Anne Stanley

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An Examination of the Impact of Induction on Teacher Efficacy

By
Julie A. Stanley

A Dissertation Submitted to the
Gardner-Webb University School of Education
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Education

Gardner-Webb University
2017

Approval Page

This dissertation was submitted by Julie Stanley under the direction of the persons listed below. It was submitted to the Gardner-Webb University School of Education and approved in partial fulfillment of the requirements for the degree of Doctor of Education at Gardner-Webb University.

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Acknowledgements

Over the years I have received support and encouragement from a great number of people. Dr. Barry Redmond has been a mentor, colleague, and friend. His guidance and unwavering support made this journey possible. I would like to thank my dissertation committee of Dr. Redmond, Dr. Sydney Brown, and Dr. Jason Parker for their faith in me as I moved from an idea to a completed study. You each demonstrated steadfast belief in me, which I carried in my heart through the toughest challenges. Dr. David Shellman generously provided valuable statistical advice. I would like to say a special thank you to Dr. Paula Wilkins for her assistance.

My experiences with a dedicated and supportive mentor, Debbie Saunders, shaped me into the educator I am today and led to my choice of research topic. I am blessed to call you my mentor and friend. I am eternally grateful for an extraordinary teacher who saw me when I could not see myself. Marilynn Anselmi, you forever changed the course of my life and words cannot express my gratitude. During data collection and writing, Tiffany Stanley dedicated countless hours to transcribing, proofreading, and listening to me talk about my research. I am also grateful to the teachers and district personnel who took part in this study for sharing their time and ideas. I have learned much through our conversations.

Dedication

I dedicate this dissertation, and all of my successes in life, to my loving family. I could never adequately express my tremendous gratitude for my mother, Betty. I am the woman I am today as a direct result of the example she has lived. My mother is the embodiment of unconditional love, perseverance, and faith in God. Life has never been easy, yet she continues to rise above all circumstances that would force a weaker person to surrender. Her strength amazes me. Thank you, Mama, for being my role model, biggest cheerleader, and guiding voice inside my head.

A special thank you goes to my incredible husband, Marvin. I have done nothing to deserve such a blessing, but I am grateful that God sent you into my life. Thank you for all of the love, support, and sacrifice you have made to lift me toward my dreams. I will love for $\infty \times \infty^\infty$.

To my four amazing children, you are my greatest successes and joys in life. I am so proud of the compassionate, kind people you are. Thank you for your sacrifice and understanding when this research demanded so much of my time. Reaching for a dream requires commitment, steadfast belief in oneself, sacrifice, and a lot of hard work. Each of you possesses these traits and untethered potential.

Abstract

An Examination of the Impact of Induction on Teacher Efficacy. Stanley, Julie, 2017: Dissertation, Gardner-Webb University, Induction Programs/Attrition/Self-Efficacy

States have turned to effective induction programs in response to rising teacher attrition rates and a widening student achievement gap. Comprehensive induction programs that develop highly efficacious teachers report a decline in teacher attrition, an increase in job satisfaction, and a rise in student achievement.

The intent of this research was to assess the level of the perceived self-efficacy of fourth-year teachers across the domains of instructional strategies, student engagement, and classroom management following the completion of the county's induction program. The study explored the induction program's structure in a large, urban North Carolina county to evaluate the extent of participant self-efficacy levels and to what degree best practices are utilized, as defined in the review of the literature. Data were collected during the spring of the fourth year of teaching following completion of the district's induction program.

This mixed-methods study utilized an interview with the program coordinator and a focus group of seven teachers from the district. A survey instrument known as the Teacher Sense of Self-Efficacy Scale (TSES) instrument was given to 32 participating teachers. The TSES is a 24-item instrument used to assess the level of efficacy teachers feel in the three domains of instructional strategies, student engagement, and classroom management. Results indicated that fourth-year teachers felt highly efficacious in all three domains, although trends in data suggested strengths and weaknesses for teachers after completing the induction program. Despite high efficacy scores, the focus group communicated negative perceptions regarding their experiences and the program's impact in all three domains. A thorough evaluation of the district's program framework revealed purposeful planning and deliberate effort to incorporate three of the four best practices identified in this study. The researcher recommended more application-based support in the teaching environment, professional development that allows teachers to play an active role, and increased accountability measures for induction coaches and mentors to ensure fidelity across the district.

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Chapter 1: Introduction

The American educational system was designed to equip our country's youth to be productive citizens (Burbules & Torres, 2000). The education system must prepare youth to think critically and creatively to solve new and increasingly complex problems and communicate effectively with people from a multitude of backgrounds. Students who are in classrooms today and tomorrow will go on to compete with colleagues all over the world for jobs in adulthood (Mongillo, 2011). The cultivation of productive, 21st century citizens requires highly qualified, competent teachers in all stages of education. "A country's performance does not begin with its corporations. Rather, it begins in the mindsets of its people; how people are taught to think, to deal with one another, to work together . . . the race begins at school" (Smith, 1995, p. 100).

Demographic trends of the population are changing and becoming more diverse, intensifying the demands placed on the education system (Smelser, Wilson, & Mitchell, 2001). Students arrive at school with a wide range of backgrounds, needs, and abilities. Although the achievement gap between racial and socioeconomic groups has been newsworthy for decades, little progress has been made to close the gap (Rothstein, 2004). Teacher quality is viewed as a critical part of reducing the achievement gap because research suggests that teacher effectiveness has more impact on student achievement than other factors such as class size (Liston, Borko, & Whitcomb, 2008). Teacher quality is frequently cited as the most important factor in student learning (Feiman-Nemser, 2001; Futrell, 2008; Johnson & Kardos, 2008; Upokodu, 2007).

Statement of Problem

Improving teacher quality has been at the forefront of educational reforms over the past 6 decades in the United States, inciting federal mandates and allotment of federal

funding (Darling-Hammond & Bransford, 2005). The U.S. Department of Education (USDOE, 2006) defended teacher quality as a crucial driving force for improving student achievement and promoting America's economic competitiveness in the global economy. Reports released by the federal government reflect a supposition that teachers are predominately of low quality and that raising certification requirements will improve teacher quality, student achievement, and economic competitiveness (USDOE, 2006). Education researchers assert that teacher quality is a significant factor in predicting student success; however, defining measures of teacher quality is challenging based on a lack of consensus on what constitutes a qualified teacher (Mongillo, 2011).

Teacher quality is an essential part of meeting student needs and closing the achieving gap (Liston et al., 2008). Bandura (1977) explained that teachers hold beliefs about their ability to influence student outcomes. These beliefs influence the degree of effort teachers put forth, how long they will continue to work in the face of considerable obstacles, the degree of resiliency when dealing with failures, and how much stress or depression they experience in coping with the demanding nature of the teaching profession (Bandura, 1997). Bandura (1977) defined this as "teacher efficacy" under the umbrella of self-efficacy and rooted in Social Cognitive Theory. Teachers with positive self-efficacy reportedly increase student achievement and motivation of students, exhibit improved commitment to the profession and therefore remain in education (Ashton & Webb, 1986; Grant, 2006).

Induction programs are vital to producing high-quality teachers with high self-efficacy (Pendergast, Garvis, & Keogh, 2011). Bandura (1997) elucidated that efficacy beliefs develop in the early years of teaching. Once established, these beliefs are unlikely to change (Bandura, 1997). The crucial nature of this window of time makes the teacher

education and induction programs critically important. “We must transform the way we bring our newest educators into our schools. It is critical to the success of our schools, to the development of teaching as a learning profession, and to the achievement of our students” (Goldrick, Osta, Barlin, & Burn, 2012, p. iii).

High teacher self-efficacy is relevant and necessary to increase teacher satisfaction, coping with the demands and stress of the profession, and instructional effectiveness (Fisher, 2011). Education in the 21st century is arguably one of the most demanding, personally taxing professions in society (Kaur, 2011). Nationwide, 10% of teachers who began their careers in 2007-2008 left teaching after their first year, according to the National Center for Education Statistics (Gray & Taie, 2015). Some educational researchers estimate a more alarming attrition rate of 20-30% for beginning teachers (Darling-Hammond, 1997). This rate can be as high as 50% in urban districts such as the county that is central to this study (Darling-Hammond, 1997). Among the most often cited reasons novice teachers leave teaching is the lack of support (Alliance for Excellent Education, 2004; Ingersoll & Strong, 2011; Walters, 2004). Induction, with mentoring, goes a long way toward filling the support gap and retaining teachers in the profession (American Federation of Teachers [AFT], 2001). Research shows that teachers who have no induction program are twice as likely to leave within the first 3 years of teaching (Projects in Education (2000). Beginning teachers with induction experiences are not only more likely to stay but also can move more quickly beyond issues of classroom management to focus on instruction (National Commission on Teaching and America’s Future [NCTAF], 1996). Given the importance of quality induction programs, this study closely examined the new teacher induction program in a large, urban district in North Carolina. The research evaluated fourth-year teachers’ self-

efficacy in using impactful instructional strategies, engaging students in learning, and managing classroom behaviors to facilitate learning.

Teacher attrition. Teacher attrition creates multiple problems for school systems. Time and money are necessary to recruit, train, and evaluate new teachers. Every teacher who leaves costs the school system. In 2007, NCTAF estimated the cost of teacher attrition in the United States at \$7.3 billion per year. In a five-district study conducted by NCTAF (2007) over 18 months using both small and large districts, researchers established that the costs of recruiting, hiring, and training a replacement teacher are substantial. More alarming and relevant to the proposed study, NCTAF (2007) also found that teacher turnover is highest in high-minority, high-poverty, and low-performing schools. As a result, these at-risk schools spend a higher percentage of available funding on teacher turnover than do high-performing, low-minority, and low-poverty schools. School systems with these characteristics, such as the district under study, spend significantly more on teacher recruitment, hiring, orientation, and separation (NCTAF, 2007).

In addition to the financial hit taken by schools, attrition costs schools and students in achievement. Research suggests that the most growth in teacher effectiveness occurs in the first 3 years of teaching, leveling out around year 5 (Harris & Sass, 2007). Research conducted by the National Center for Analysis of Longitudinal Data in Education Research (CALDER) supports that theory, concluding that teachers show the greatest growth in productivity during their first few years in the classroom, after which their performance tends to level off (Rice, 2010). Research findings indicate that, on average, teachers with more than 20 years of experience are more effective than teachers with no experience but are not much more effective than those with 5 years of experience

(Ladd, 2008). Usually, new teachers are less effective than more experienced colleagues, so replacing teachers who leave the field with novice teachers jeopardizes student achievement (Hanushek, Kain, O'Brien, & Rivkin, 2005). When a teacher walks out of the profession, all experience leaves too. Early career experience has a definitive, positive impact on teacher effectiveness (Rice, 2010). The impact is stronger than the effect of advanced degrees, teacher licensure tests scores, National Board certification at the elementary level, or class size (Clotfelter, Ladd, Vigdor, & Wheeler, 2007; Ladd, 2008; Rice, 2010; Sass, 2007). Therefore, focusing on supporting teachers' professional growth in the first 5 years in the classroom is a shift toward cost efficiency. Retaining teachers through induction support costs the district less than a cycle of training new teachers who leave the field.

North Carolina's teacher attrition rate is the highest it has been in 5 years (North Carolina Department of Public Instruction, 2015). North Carolina lost approximately 2,700 teachers at the end of the 2014-2015 school year due to causes that suggest personal dissatisfaction with the state's public schools, whether through an outright exit from the profession, poaching by other states, or early retirement (Brenneman, 2015). That compares with 2,245 teachers who reported leaving for such reasons the year before, a 21% increase (Brenneman, 2015). North Carolina employed about 96,000 teachers during the 2014-2015 school year (Brenneman, 2015). North Carolina spends approximately \$12,500 per teacher in recruitment and training to replace those who leave the classroom (Corbell, 2009; NCTAF, 2007). Teacher attrition, therefore, cost the state a total of \$178 million last year, of which approximately \$33 million was the direct result of dissatisfied teacher resignations (Corbell, 2009; North Carolina Department of Public Instruction, 2015.)

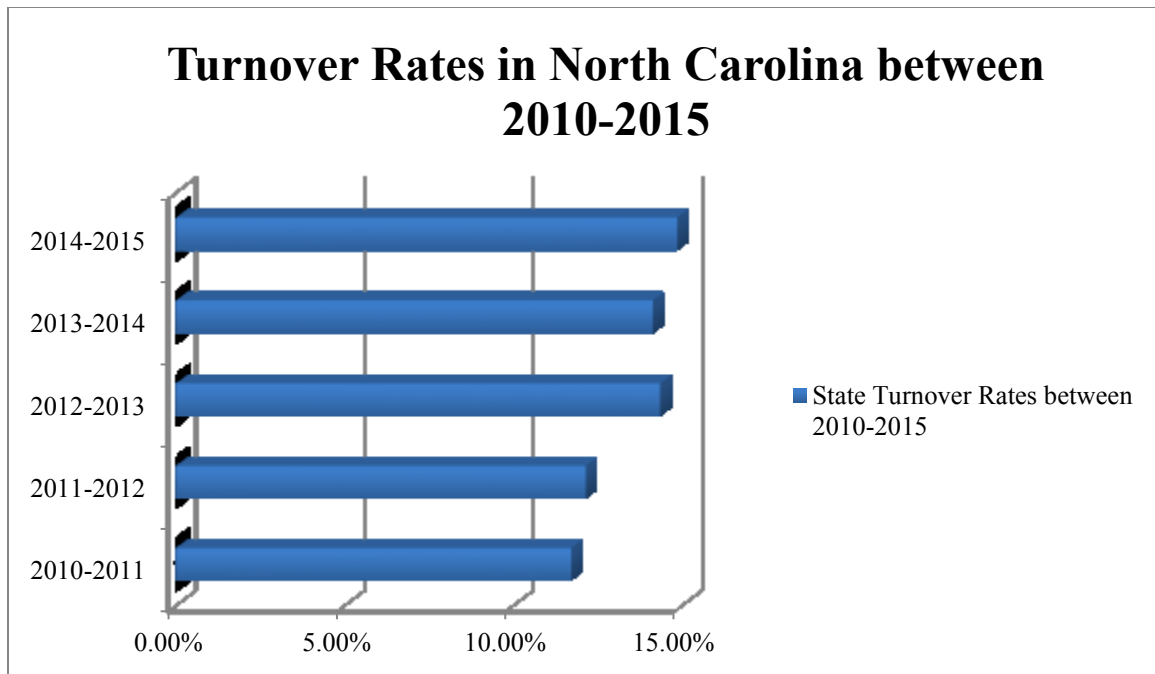


Figure 1. Turnover Rates in North Carolina.

Beginning teachers' most often cited reason for fleeing the classroom within the first 3 years is "lack of support" (Alliance for Excellent Education, 2004; Ingersoll & Strong, 2011; Reeder, 2013; Smith & Ingersoll, 2004; Walters, 2004). A strong induction program, targeting the development of teacher self-efficacy through the mentor, administrative, and collegial support may drastically impact novice teachers' attrition rate (Alliance for Excellent Education, 2004; Howe, 2006). Teachers who did not participate in an induction program were nearly twice as likely to leave the classroom (20%) as those who took part in such a program (11%; Britton, Raizen, Paine, & Huntley, 2000). There is substantial evidence that quality induction programs may be used as tools to retain young teachers (AFT, 2001). In California, the Beginning Teacher Support and Assessment Program, a mandatory 2-year induction program, has reduced beginning teacher attrition from 39% to 9% (AFT, 2001). Similarly, other districts around the

country offer equally compelling results. These include areas of historically high attrition rates for new teachers, drastically reduced through induction programs. Rochester, NY, Toledo and Cincinnati, OH, and Poway, CA are a few of the districts to claim such positive effects of induction services on new teacher attrition rates (AFT, 2001).

Impact of High-Quality Induction

Induction programs are designed to empower and build self-efficacy for the new teachers while providing the tools to succeed in the building where they teach (Lowrey, 2012). Teacher self-efficacy is the “teachers’ belief or conviction that they can influence how well students learn, even those who may be difficult or unmotivated” (Guskey & Passaro, 1994, p. 628). Teacher self-efficacy impacts student outcomes such as motivation, achievement, and student efficacy (Ashton & Webb, 1986). Teacher self-efficacy influences instructional practices, satisfaction in the field, and longevity in the classroom (Ashton & Webb, 1986; Grant, 2006; Perrachione, Rosser, & Petersen, 2008). Teachers with positive self-efficacy about their ability to teach increase student achievement and motivation (Ashton & Webb, 1986; Grant, 2006). “Comprehensive induction programs are designed to increase teacher efficacy, promote quality professional development, and facilitate a collaborative work environment among teachers” (Alliance for Excellent Education, 2004; Reeder, 2013, p. 2).

Teacher credentialing programs typically offer a comfortable, supportive network for aspiring teachers. After graduation, many novice teachers feel isolated and become overwhelmed in the face of the teaching demands, which leads to frustration and lower self-efficacy (Chang-Miller, 2009; Lowrey, 2012). The isolation can lead to a lack of efficacy in teacher abilities to deliver a quality education to students which can lead to burnout and departure from the profession altogether (Walters, 2004). Isolation is one of

many threats to positive teacher-efficacy; however, high-quality induction serves to counter the feelings of isolation by offering regular support and encouragement to the new teacher (Lowrey, 2012). Additionally, new teachers arrive at the first year in the classroom with ample theoretical knowledge but limited experience in actual educational best practices (Lowrey, 2012). A high-quality induction program may alleviate frustration and disillusionment perceived by beginning teachers, combating threats to positive teacher self-efficacy. Educational researchers suggest that between 40% and 50% of new teachers will leave the education workforce within years (Ingersoll, 2012; Potemski & Matlach, 2014). Research shows that induction programs can increase teacher retention rates; however, this impact is contingent upon the quality of new teacher supports (Ingersoll, 2012; Smith & Ingersoll, 2004).

A review of the literature validates the importance of teacher beliefs about their abilities and proper training to be effective. High-quality educators are in demand nationwide. Therefore, a look at essential components of teacher education programs and beginning teacher support programs (BTSPs) is necessary to inform policy (Mongillo, 2011). This study sought to quantitatively assess teacher self-efficacy levels; examine the types of training and early career experiences teachers believe shaped their feelings of efficacy; and establish four induction best practices aligned with constructs of instruction, student engagement, and classroom management.

Elements of high-quality induction. To date, there is no single prescribed recipe for yielding high-quality teachers. Induction programs come in all shapes and sizes; however, a thorough review of the literature reveals common elements that routinely appear in the most positively impactful induction programs worldwide. The methods that are most impactful upon self-efficacy include

- mentoring (Feiman-Nemser & Carver, 2012; Moirs, 2005; Reeder, 2013);
- rigorous and sustained professional development (Alliance for Excellent Education, 2004; Ingersoll & Strong, 2011; Wei, Darling-Hammond, Andree, Richardson, & Orphanos, 2009)
- multi-day orientation (Reeder, 2013; Stansbury & Zimmerman, 2000; Wood & Stanulis, 2009); and
- program evaluation to inform program leaders about strengths and weaknesses of the program (Alliance for Excellent Education, 2004; Wood & Stanulis, 2009).

Research suggests that quality induction programs should utilize multiple supportive conditions such as (a) content focused groupings, (b) required meetings with principals, (c) administrative observations, and (d) reduced duties (outside of direct instruction in the classroom) for beginning teachers (Bartlett & Johnson, 2010; Ingersoll & Smith, 2004). Common team planning schedules and ample access to resources are necessary elements in effective induction programs (Bartlett & Johnson, 2010; Hunter, 2014; Ingersoll & Smith, 2004). While all items may not be present in every induction program, a combination of these elements usually comprises high-quality induction programs that build self-efficacy (Hunter, 2014).

North Carolina Induction Policy

According to the North Carolina State Board of Education (NCSBOE), North Carolina teachers who hold an initial (Standard Professional 1) license after January 1, 1998 are required to participate in a 3-year induction period with a formal orientation, mentor support, observations, and evaluation prior to the recommendation for continuing

licensure (Standard Professional 2; NCSBOE Policy Manual, 2016). The State Board expects beginning teachers to be assigned to their area of licensure. Beginning teachers are required to participate in a Teacher Support Program for 3 years of teaching experience, each year consisting of at least 6 months (NCSBOE Policy Manual, 2016). Beginning teachers are required to develop a Professional Development Plan in collaboration with his/her principal (or the principal's designee) and mentor teacher. The plan is to be based on the North Carolina Professional Teaching Standards and must include goals, strategies, and assessment of the beginning teacher's progress in improving professional skills (NCSBOE Policy Manual, 2016). In developing the plan, "the beginning teacher, principal (or designee), and mentor teacher should begin with an assessment of the beginning teacher's knowledge, dispositions, and performances" (NCSBOE Policy Manual, 2016, p. 1). The Board established an expectation of formative assessment conferences to reflect on the progress of beginning teachers in meeting the goals established for professional growth. The professional growth plan should be updated on an annual basis, each year of the BTSP (NCSBOE Policy Manual, 2016).

The State Board of Education expects every beginning teacher to receive an orientation session before students arrive in the fall. If the teacher is employed during the school year, policy states that orientation should be conducted within the first 10 days of employment. At a minimum, the orientation should provide the beginning teacher with an overview of the school's/system's goals, policies, and procedures; a description of available services and training opportunities; the BTSP; and the process for achieving a Standard Professional 2 (continuing) license (NCSBOE Policy Manual, 2016).

Local school systems are responsible for providing training and support for mentor teachers. Mentors need the knowledge, skills, and attitudes to be effective

instructional coaches, emotional supports, and organizational guides to those entering the profession (NCSBOE Policy Manual, 2016). The Board of Education established five Standards for Mentor Training to standardize the mentor selection process (NCSBOE Policy Manual, 2016). It is important to note that each Local Education Authority (LEA) may choose to use programs developed by the Department of Public Instruction, use other programs (e.g., Teacher Academy), or develop programs of their own.

Although the State Board of Education established standards for BTSPs, much control over the delivery methods of support rests in individual LEAs. Therefore, programs differ among states. Moreover, within North Carolina, induction programs differ between neighboring districts. This inconsistency warrants a look at teacher self-efficacy and perceptions of program impact after completion of the state-mandated, 3-year program.

Significance of the Study

Teacher efficacy beliefs relate to instructional behaviors (Bandura, 1997). Efficacy affects the effort that teachers invest in teaching, the goals they set, and their commitment to the profession (Bandura, 1997). Teachers with a strong sense of efficacy tend to exhibit greater levels of planning and organization as well as optimism toward new ideas and methods to better meet student needs (Allinder, 1994; Berman, McLaughlin, Bass, Pauly, & Zellman, 1977; Guskey, 1988; Stein & Wang, 1988; Tschannen-Moran & Hoy, 2001). Teacher self-efficacy also relates to persistence and resilience when lessons do not go as planned and teachers experience setbacks (Tschannen-Moran & Hoy, 2001). Teachers with higher self-efficacy are typically less critical of students when they make mistakes (Ashton & Webb, 1986), devote more time to struggling students (Gibson & Dembo, 1984), and are less likely to refer an

unmotivated student to special education (Meijer & Foster, 1988, Tschannen-Moran & Hoy, 2001). Teachers with greater self-efficacy demonstrate more enthusiasm for teaching (Allinder, 1994; Guskey, 1988), have a vast commitment to the profession (Coladarci, 1992; Evans & Tribble, 1986), and are more likely to remain in the teaching profession (Glickman & Tamashiro, 1982).

North Carolina's climbing teacher attrition rate necessitates attention to the critical role induction support programs play in cultivating career, high-quality teachers. Induction programs that yield high efficacious teachers report a drastic reduction in teacher attrition, increase in job satisfaction, and a significant elevation in student achievement (AFT, 2001). Feiman-Nemser, Schwille, Carver, and Yusko (1999) wrote, "Providing support to beginning teachers is a humane response to the trials and tribulations associated with the first year of teaching" (p. 9). A study conducted by Smith and Ingersoll (2004) concurred, stating that beginning teachers who were provided some form of induction program were less likely to move to other schools or leave the profession after their first year of teaching. In a study related to teacher retention conducted at Harvard, findings show that new teachers are more likely to stay in a job if they have high self-efficacy, feel supported, and feel satisfied (Johnson & Birkeland, 2003). It can be concluded that if induction programs lead to support, self-efficacy, and satisfaction, then teachers are more likely to remain in the profession and commit to the high-quality teaching necessary to rectify the achievement disparities that have historically plagued public education. Although research shows a correlation between student achievement and teacher self-efficacy (Ashton & Webb, 1986) and reduced teacher attrition rates (Ingersoll, 2012), teacher education and induction programs do not focus on the self-efficacy needs of preservice and beginning teachers (Mongillo, 2011).

Purpose of the Study

Ashton and Webb's (1986) research identified a relationship between high efficacy attitudes and a belief that all students can and want to learn. Ashton and Webb described a link between high efficacy and efforts to create caring and meaningful relationships with students; the belief that students who are treated fairly, firmly, and with consistency will behave well and the use of calm, rational management strategies. The researchers also reported that high efficacy beliefs also correlate with a reluctance to embarrass students and an expressed effort to treat all students as being trustworthy and possessing the potential to learn. Teachers with perceptions of high self-efficacy tend to focus on instruction and the value of student learning, an effort to keep students cognitively engaged, and a desire to monitor all students' progress (Ashton & Webb, 1986). Highly self-efficacious teachers demonstrate a resolve not to accept student failure (Ashton & Webb, 1986).

Conversely, Ashton and Webb (1986) concluded that low efficacy attitudes were related to a distrust of low-achieving students and, naturally, an environment of stress and discomfort for these students. Teachers with low self-efficacy are more likely to rely on discipline tactics such as using embarrassment as a behavior management strategy (Ashton & Webb, 1986). These teachers who lack confidence tend to classify students by ability levels and academically ignore the lowest achievers (Ashton & Webb, 1986). Teachers with low self-efficacy routinely reprimand low-achievers by excluding them from the physical classroom (Ashton & Webb, 1986). According to Ashton and Webb, these teachers place no emphasis on instruction and the value of learning. Teachers with low self-efficacy beliefs are unable to authentically engage students in academics and are unwilling to accurately progress monitor student learning (Ashton & Webb, 1986).

The study of self-efficacy development in novice teachers is critical because Bandura (1997) asserted that efficacy beliefs develop in early years of teaching and, once established, are unlikely to change. In the face of escalating state and national teacher attrition rates, an expanding student achievement gap, and an ever-growing demand for high-quality teachers, an examination of beginning teacher efficacy is relevant and necessary. Given the importance of a strong induction program, demonstrated by decades of research and literature, the purpose of this study was to assess (a) how efficacious teachers perceive themselves across the domains of instructional practices, student engagement, and classroom management; (b) fourth-year teacher perceptions of their development of each construct through experiences built into the district's induction program; and (c) the degree to which the program's components align with best practices identified through review of the literature.

Research Questions

The study answered the following research questions to inform the practice of induction programs to develop and retain highly qualified teachers.

Research Question 1. What is the level of self-efficacy of fourth-year teachers across the domains of instructional strategies, student engagement, and classroom management after participation in the district's induction program?

Research Question 2. What are the perceptions of fourth-year teachers related to the domain of instructional strategies, student engagement, and classroom management after participating in the induction program?

Research Question 3. How does the induction program align with best practices with regards to building self-efficacy in instruction, engagement, and management of a classroom?

A review of the literature validates the importance of teacher beliefs about their abilities and proper training to be effective, yet relatively few studies have qualitatively examined teacher perceptions about their degree of efficacy and preparation to enter the classroom as an effective educator (Tschannen-Moran & Hoy, 2007; Tschannen-Moran, Hoy, & Hoy, 1998). Therefore, this study aimed to quantitatively assess teacher self-efficacy levels and to examine the types of training and early career experiences that teachers believe shaped their feelings of efficacy. Although research shows a significant correlation between student achievement and teacher self-efficacy (Ashton & Webb, 1986), North Carolina Professional Teaching Standards do not attend to the formation of efficacy beliefs. Improving teacher quality necessitates more than prescribed content knowledge. Policy calls for the development of high-quality teachers; therefore, a thorough consideration of essential components of teacher education programs and BTSPs is necessary to inform such a policy (Mongillo, 2011).

Methodology Overview

The mixed-methods design of this research study involved three phases of investigation. The researcher emailed all fourth-year teachers an invitation to participate in the study and a letter of informed consent. Participants had the option to return the consent form via email or click the Google form hyperlink on the consent form. Once consent was obtained, the researcher sent a second email containing the Google form hyperlink to the Teacher Sense of Self-Efficacy Scale (TSES) instrument (see Appendix A). Teachers responded to seven preliminary demographic questions before completing the 24-item TSES. After teachers submitted their responses, an invitation to participate in a focus group appeared on the exit screen. Teachers who volunteered for the focus group followed a final link to a third Google form to input their contact information so

the researcher could notify participants of the date and time of the focus group meeting (see Appendix B). The separate link ensured anonymity of TSES data.

The second phase of investigation involved qualitative data collection. The researcher interviewed the induction program coordinator who is responsible for the structure and implementation of the induction program for the district. Eleven broad questions embedded in the interview protocol guided the researcher's collection of program information (see Appendix C). The interview was captured with a digital voice recorder and transcribed by the researcher. During the interview, the program coordinator gave the researcher a copy of the goals and framework of the induction program, the schedule of beginning teacher meeting dates, a calendar of professional development workshops and descriptions, and handbooks of mentor procedures and guidelines.

A focus group comprised of fourth-year teachers who successfully completed the induction program and responded to the TSES instrument offered an in-depth reflection of experiences while in the program. The researcher seized the opportunity to explore teacher perceptions of the impact of the induction experiences upon their developing sense of self-efficacy. Seven scripted questions guided the focus group discussion (see Appendix D). The researcher captured all dialogue with a digital voice recorder to facilitate accurate transcription.

Theoretical Framework

The theoretical framework of this study is rooted in a postpositivist point of view, built on the idea that individuals construct their reality based on external factors and belief systems (Creswell, 2014). These belief systems allow human beings to make good judgments about their capabilities and serve as “a working model of the world that

enables people to achieve desired outcomes and avoid untoward ones” (Bandura, 2001, p. 3). Bandura (1982) argued that behavior is controlled by an individual’s personal efficacy beliefs rather than the strict behavioristic assumption of reinforcing consequences (Ashton & Webb, 1986). People are agents of experiences, rather than subjects of experiences (Bandura, 2001). Social cognitive theory is founded upon a model of emergent brain activities that exert determinative influence (Bandura, 2001). Bandura (2001) wrote, “The human mind is generative, creative, proactive, and reflective” (p. 4). Within this theoretical framework, behavior is analyzed as socially interdependent, contextualized, and developed within complex interplay of societal subsystems (Bandura, 2001).

When a person believes he or she has mastered the behaviors necessary to yield a favorable result, a sense of self-efficacy develops (Ashton & Webb, 1986). The strength of a person’s self-efficacy influences whether he or she will initiate behaviors or persevere when facing obstacles or difficulties (Ashton & Webb, 1986; Bandura, 1977, 1978, 1981, 1982). Unless an individual believes he or she can produce a desirable result and avoid negative results by their actions, there is little motivation to act or sustain effort when one experiences challenges (Bandura, 2001). Therefore, “teachers’ sense of personal teaching efficacy is an integrating construct that mediates the relationship between teachers’ expectations about the efficacy of teaching specific students and teachers’ classroom interactions with those students.” (Ashton & Webb, 1986, p. 7). Tschannen-Moran and Hoy (2001) determined that examining teacher degrees of perceived self-efficacy in engaging students, delivering quality instruction, and managing a classroom appropriately encompasses the broad range of tasks and responsibilities felt by teachers. When teachers feel highly efficacious in these three areas, teachers hold a

high degree of confidence in their ability to teach well.

Bandura (1986) theorized that the experiences during novice years may determine teacher efficacy beliefs that, in turn, impact teacher and student successes. According to Bandura (1997), there are four sources of efficacy that inform teacher self-beliefs. These are mastery experience, verbal persuasion, vicarious experiences, and emotional arousal (Bandura, 1997).

Bandura (1997) postulated that teachers make judgments of their self- efficacy based on the verbal encouragement of important others such as colleagues, supervisors, and administrators (verbal persuasion), the success or failure of other teachers who serve as models (vicarious experiences), perceptions of past experiences of teaching (mastery experiences), and the level of emotional and physiological arousal experienced as they anticipate and practice teaching.

(Tschannen-Moran & McMaster, 2009, p. 229)

New teachers rely on a quality induction program to deliver these four sources throughout the initial years of teaching in order to develop positive self-efficacy. This reliance exerts pressure on induction programs to deliver the experiences, relationships, and elements necessary to build teacher self-efficacy.

Teacher self-efficacy is a teacher's explicit judgment of personal ability level after self-reflection and analysis of the task and circumstances (Tschannen-Moran et al., 1998). "By conceptualizing teacher efficacy in terms of the confluence of judgments about personal teaching competence and the teaching task, both competence and contingency are considered in an explanation of resultant teacher efficacy" (Tschannen-Moran et al., 1998, p. 233).

As illustrated below, development of self-efficacy is a cyclical process. Great

proficiency leads to greater effort and persistence which, in turn, leads to better proficiency. The reverse holds true: The lower the proficiency, the less effort is given and abandonment of the task, which then results in decreased efficacy.

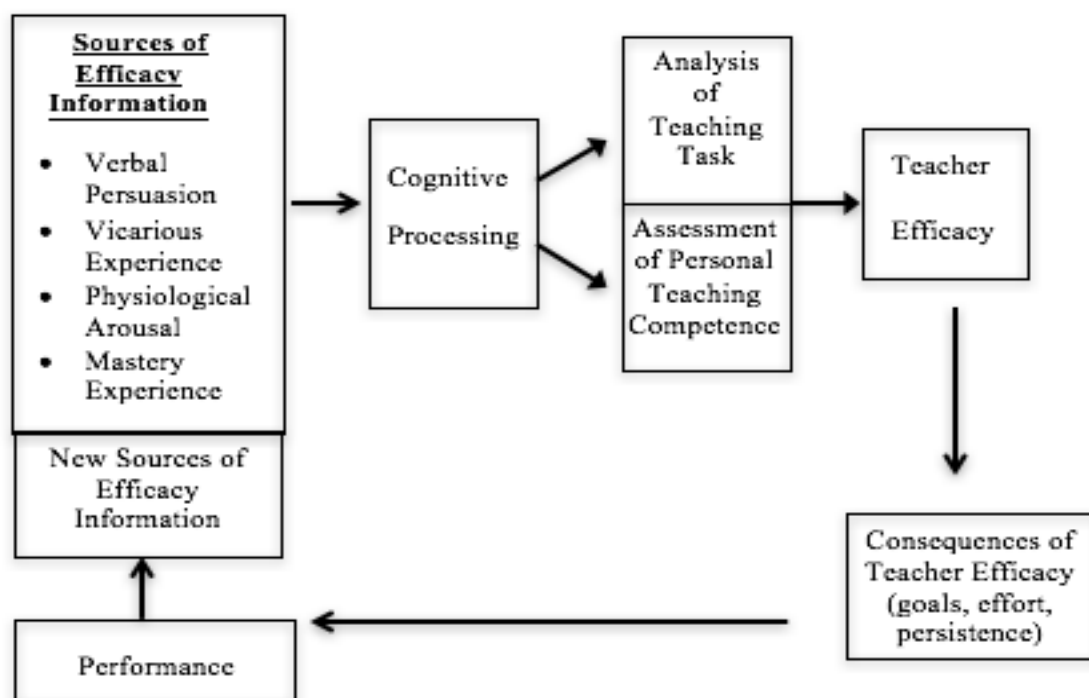


Figure 2. Theoretical Framework: Cyclical Nature of Teacher Efficacy (Tschannen-Moran et al., 1998).

Assumptions, Limitations, and Delimitations

This study assessed fourth-year teachers' sense of self-efficacy after completing the district's induction program; teacher perceptions of the effectiveness of the program; and the degree of alignment with best practices and constructs of instruction, student engagement, and classroom management. The researcher collected different data sources to evaluate the effectiveness of the district's induction support efforts. The study was conducted in a large, urban county in North Carolina. Structure and organization of support components vary widely across the state and country. Therefore, results may be

generalized to programs with similar program designs, resources, and sizes.

Measurement of efficacy has challenged researchers for decades. As an abstract construct, efficacy is subjective to interpretation. Literature suggests that teacher efficacy could be shaped by several situational factors including (a) size of class (Glass & Smith, 1979); (b) characteristics of students (Brophy & Evertson, 1981; Good & Grouws, 1979); (c) context of subject matter taught (McDonald & Elias, 1976); (d) instructional design and delivery (Bossert, 1979); and (e) the school setting in which the teacher works (Ashton & Webb, 1986). Home, community, and culture also influence life inside classrooms and therefore teacher efficacy (Ashton & Webb, 1986). These indirect influences were not expressly measured in this study.

The research relied upon respondents' willingness to volunteer their time and energy to the study during the spring semester. In spring, teachers often feel the stress of impending end-of-year testing, report cards, mandatory school functions, parent conferences, etc. A perceived lack of available time may have led teachers to feel less inclined to volunteer for this study. A singular focus on fourth-year teachers restricted the sample size and response rate further. Only 38% of teachers from the 2012-2013 induction cohort were district employees in 2016, thus narrowing the population. As a result, the sample size and response rate were limited.

Self-reported perceptions of efficacy carry an inherent threat to validity. It is an assumption of the study that participants answered accurately and honestly. Self-reporting may have produced findings different from what participants actually do or feel in real-world scenarios (Foss & Waters, 2007). Self-reporting is naturally subjective; however, the researcher evaluated several sources and types of data to evaluate the program's effectiveness. By triangulating data sources and using them to build a

coherent justification for findings, the researcher answered the limitation and preserved the study's validity.

Deficits in the Literature

Relatively few studies have qualitatively examined teacher perceptions of their degree of efficacy and preparation to enter the classroom (Tschannen-Moran & Hoy, 2007; Tschannen-Moran et al., 1998). Much of the published literature assumes a retrospective view, once teachers are in the role and often face the same expectations by the administration as veteran colleagues. More research is needed with preservice teachers to understand what experiences build their self-efficacy before assuming the responsibilities of a classroom teacher.

Most of the literature on self-efficacy is self-referent in nature. Correlational research designs, with self-report and survey as data collection tools, have historically asked participants to judge themselves in various tasks. Over the past 5 decades, considerable debate about the use of task analysis to study self-efficacy has challenged researchers. A lack of agreement over which tasks, responsibilities, and skills should be considered when measuring efficacy has plagued research for decades and is evident in a progression of efficacy measurement instruments. Researchers such as Henson (2001) have raised several questions regarding which tasks should be analyzed to capture such an elusive construct as efficacy. What elements of the complex, multifaceted teaching context are most relevant to efficacy judgments? How much of efficacy is subject-specific? Ashton and Webb (1986) wrote, "Efficacy beliefs are not unidimensional and, consequently, can be expected to have different relationships with the different subject matter" (pp. 138-139). While a teacher may feel efficacious when teaching a subject matter in which he/she has personal strength, a different subject may evoke a different

level of efficacy and, consequently, different teaching behaviors and student outcomes.

Definitions of Terms

BTSP. Beginning Teacher Support Program.

Classroom management. Teacher efforts to (a) organize, allocate, and arrange resources; (b) establish and enforce rules, routines, expectations, and procedures; and (c) intervene and restore order when behavior becomes disruptive of learning (Brophy, 1988; Doyle, 2006).

General teaching efficacy. Also referred to in literature as “outcome expectancy.” Outcome expectancy is the degree to which teachers believe that environment could be controlled to yield desired results (Gibson & Dembo, 1984).

Induction. New Teacher Center (NTC) defined as “comprehensive systems of support and training for beginning teachers” (Johnson, Golderick, & Lasagna, 2010, p. 1).

Instructional strategies. Strategies for combating student tedium and elevating student achievement, including the utilization of a variety of instructional methods to instruct students at various cognitive levels (Jeck, 2010).

Mastery experiences. One of four sources of teacher self-efficacy (Bandura, 1986, 1997). Repeated successes in a specific interaction that produce desired outcomes result in elevating self-efficacy for that situation. Contrarily, repeated failures result in lowering teacher self-efficacy.

Novice teacher. Teachers who have been employed and working in the classroom for less than 3 years (Tschannen-Moran & Hoy, 2007). Within this text, the term “beginning teacher” may be used interchangeably.

Personal teaching efficacy. The degree to which teachers believe their abilities can bring about positive changes in students (Gibson & Dembo, 1984).

Physiological arousal. One of Bandura's (1986, 1997) four sources of self-efficacy. Physiological arousal refers to the physical reaction that a person experiences while completing a task such as increased heart rate or sweating (Mongillo, 2011). Self-efficacy is developed through these experiences via interpretation of the emotions the physiological changes imply (Mongillo, 2011).

Self-efficacy. A "cognitive process in which people construct beliefs about their capacity to perform at a given level of attainment" (Tschannen-Moran et al., 1998, p. 203). It is under this umbrella that Bandura (1997) distinguished teacher efficacy as a type of self-efficacy.

Social cognitive theory. A learning theory based on the concept that learning occurs by observing others, with influence from environment and behaviors. A crucial element is the role of the individual's cognition in interpreting events (Mongillo, 2011).

Student engagement. Four-part definition: Academic engagement refers to the amount of time a student spends on completing schoolwork in the classroom or at home, the number of credits the student accrues, and the amount of homework completed. Behavioral engagement refers to attendance and active participation and discussion in class. Cognitive engagement is described as an interest in learning, goal setting, and self-regulation of performance. Affective engagement refers to how well the student feels he or she belongs and connects with parents, teachers, and peers (Furlong & Christenson, 2008).

Teacher self-efficacy. The belief of a teacher that he or she has adequate training and experience to teach successfully and impact student learning, even those who may be difficult to motivate (Grant, 2006; Guskey & Passaro, 1994; Tschannen-Moran et al., 1998). It consists of three factors of student engagement, instructional strategies, and

classroom management (Klassen et al., 2009; Tschannen-Moran & Hoy, 2001).

Verbal persuasion. One of four sources of self-efficacy (Bandura, 1986, 1997). Verbal persuasion refers to the verbal interactions a person has about his or her capacity for successfully completing a task. Positive verbal comments encourage the person to work harder, persevere, and adjust their strategies for success when problems arise.

Veteran teachers. Teachers who have taught for 4 or more years. Tschannen-Moran and Hoy (2007) also used the term Career Teacher, which may be used interchangeably in this publication.

Vicarious experiences. One of four sources of self-efficacy (Bandura, 1986, 1997). Vicarious experiences occur when someone observes a model engaging in the behavior to be learned by the observer (Mongillo, 2011).

Summary

Chapter 1 serves as an overview of the problem that inspired the study and the significance of this research. This chapter presents key issues related to the value of the study. The purpose of this research was to assess the effectiveness of the district's induction program through examination of (a) teacher reported self-efficacy levels; (b) teacher perceptions of how induction experiences impacted their development in instructional strategies, student engagement, and classroom management; and (c) how well the induction program aligns with best practices with regards to building self-efficacy in the measured constructs. An effective induction program is more likely to nurture strong, resilient teachers who effectively instruct, engage, and manage their classrooms. This research is needed in the wake of an alarmingly high attrition rate among new teachers across the state and the district. As a country, there is a critical need for high-quality teachers to positively impact student success.

Chapter 2 examines the published literature about self-efficacy and Social Cognitive Theory as related to teacher effectiveness. In Chapter 2, the researcher provides a thorough review of the literature to establish a correlation between high teacher self-efficacy, elevated student achievement, and lowered teacher attrition. Five decades of research support the link between self-efficacy and teacher quality. Although building self-efficacy is not an expressed goal of the induction program or state policy, this study served as a litmus test for the induction program's effectiveness in cultivating highly effective teachers.

The third chapter is a detailed account of the mixed-methods methodology and instruments employed in the collection of data. Tools of data collection are identified and explained in this chapter, including the TSES instrument, scripted focus group and interview protocols, program manuals, and the evaluation rubric published by the State Board of Education. Chapter 3 describes participants of the study as well as offers a discussion of generalizability and limitations of the study.

Chapter 4 reports the data collected through the methods and instruments discussed in the preceding chapter. Results are displayed in tables and narrative to facilitate the reader's understanding of teacher perceptions and the program alignment of best practices with regards to building self-efficacy in instruction, engagement, and management. The data displayed in Chapter 4 were analyzed using the Software Package for Statistical Analysis (SPSS) and Dedoose web-based software. Self-efficacy scores were segregated into the three constructs and compared along demographic categories of age, race, Title 1 school status, and grade level setting (elementary, middle, or high schools). Chapter 4 details teacher perceptions of the impact of induction experiences upon their development of self-efficacy along the measured constructs. Several tables are used to fully appraise the

degree of alignment between the district's program framework and research-based best practices.

Chapter 5 presents the researcher's evaluations based on the data collected and displayed in the preceding chapter. In the final chapter, the researcher triangulates data to reach conclusions about the program's effectiveness in cultivating skills of instruction, student engagement, and classroom management in beginning teachers. Conclusions about the program's incorporation of induction best practices are presented and discussed. A thorough discussion of each research question and the relevant data is a focal point of Chapter 5. Finally, the researcher advances suggestions for future research to continue shaping and supporting highly efficacious teachers in North Carolina.

Chapter 2: Literature Review

Introduction

High quality beginning teacher induction is widely accepted by the education community as a vital step in the development of effective educators. School systems have turned to comprehensive induction programs to reduce high turnover rates among new teachers and increase student achievement. Unfortunately, not every induction program is successful. Programs' structure, components, and elements of accountability and evaluation differ among districts. The inconsistency in program designs and compositions across the United States has resulted in a decrease in teacher development, a rise in teacher attrition rates, and negative influence on student achievement (Bullough, 2012). This study examined an urban district in North Carolina to assess fourth-year teacher perceptions of self-efficacy across the domains of instruction, engagement, and classroom management. The researcher explored teacher perceptions of self-efficacy after 3 full years of induction, teacher reflections about the role that induction experiences played in building self-efficacy, and the alignment of program elements to researcher-based, best practices.

This chapter provides a review of induction literature including related concepts of efficacy, attrition, best practice, achievement, and policy. The preliminary discussion is about the trend of teacher attrition rate, the various costs of teacher turnover, and potential causes of teacher departures from the profession. A closer examination of the literature reveals the impact of the mass exodus of teachers on student achievement and the general state of education in America. Following detailed analysis of instruction, student engagement, and classroom management constructs, the researcher focuses on the "best practices" of a comprehensive induction plan that produce highly efficacious and

satisfied teachers. Chapter 2 concludes with a discussion of the challenges of implementing a comprehensive induction plan and North Carolina's induction policy.

Teacher Attrition

New teachers step into their classroom with the passion and inspiration to change the world. These emotions are short-lived, as nearly half of them do not survive beyond 5 years of teaching (Smith & Ingersoll, 2004). Many do not survive the first year in the real-world classroom. Although some debate exists among researchers as to an exact national attrition rate, a review of the literature reveals an undeniable increase in teacher attrition over the past 30 years. Generally, between one third and one half of beginning teachers resign within the first 3 years of their teaching career (Ingersoll & Smith, 2004). The national trend of rising teacher turnover rate is mirrored in North Carolina's attrition data (Reeder, 2013). In 2014-2015, the state teacher attrition rate was reported as 14.84%, slightly higher than the 14.12% reported in 2013-2014 (North Carolina Department of Public Instruction, 2015). Nearly 15% of teachers (14,255 teachers) left the classroom in 2015 alone (North Carolina Department of Public Instruction, 2015). Individual district annual attrition rates ranged from as low as 5% to 34% (North Carolina Department of Public Instruction, 2015).

Costs of attrition. Johnson, Berg, and Donaldson (2005) classified three compounding costs of attrition: organizational, instructional, and financial. Johnson et al. underscored organizational costs as the potential loss of "a coherent education program, institutional memory, and staff cohesion" (p. 13). Students, teachers, and administrators all pay these costs in times of high attrition. There is legitimate concern in the education community that teacher experience and knowledge may be lost to the profession through attrition and retirement (Ingersoll, 2001; Lonsdale & Ingvarson, 2003; Ramsey, 2000;

Skilbeck & Connell, 2003, 2004).

Attrition disrupts the school as an organization, especially if a teacher who developed a special curriculum or sponsored a school program leaves. Teacher turnover carries a cost to individual teachers as well as to the community that the school system serves (Buchanan, 2009, 2010; Connell, 2007; Korthagen, 2004). A high teacher turnover rate reduces an organization's stability, coherence, and morale. The school climate and culture is negatively affected by high teacher attrition. Therefore, the overall effectiveness of the school is lessened (Smith & Ingersoll, 2004).

Students are negatively impacted by high attrition rates. Unfortunately, low-income, urban students are seemingly more affected by teacher turnover than others. Urban area schools experience a greater rate of teacher turnover than rural or suburban schools. According to Matus (1999), the additional concerns and pressures related to teaching in high poverty schools result in an average career of 3-5 years. In a 5-year period, approximately one half of all urban community school teachers leave the profession (Matus, 1999). Boutelle (2009) explained that a cyclical relationship develops: As teachers flee urban classrooms, positions are filled by less qualified, naïve teachers who are, in turn, overwhelmed and unprepared to meet the challenges associated with urban teaching. This cycle of attrition results in a decline of quality of teacher candidates, negatively impacting student achievement (Boutelle, 2009). It also limits the school's long-range planning and reform efforts (Brewster & Railsback, 2001). Plunkett and Dyson (2011) suggested that "attrition rates for teachers do not differ markedly from those of other professions" but suggested that the implications for the workforce are greater" (p. 33). The implications highlight the problem of "possible compromise of student learning" (Plunkett & Dyson, 2011, p. 33).

In addition to the decline in student achievement, attrition places hardships on school districts to meet the high costs of recruiting, hiring, and training replacement teachers (Wong, 2003). Ingersoll and Smith (2004) used a metaphor of a leaky bucket to describe efforts used by schools to attract new teachers who replace the steady outflow of frustrated teachers. If the turnover pattern continues and new recruits leave, schools drain monetary funds to prepare a constant new crop of new teachers who arrive with little teaching experience and leave before they become skilled. According to Breaux and Wong (2003), if school systems measure human resource specialists the way high-performance industries measure a loss, the estimated financial cost per teacher departure exceeds \$50,000. A conservative national estimate of cost for replacing public school teachers who have abandoned the profession is \$2.2 billion per year (Alliance for Excellent Education, 2005). According to the same source, the cost is \$4.9 billion per year when costs of replacing teachers who transfer to other schools or districts are included. On the state level, North Carolina spends an average \$12,500 to replace a new teacher (Corbell, 2009). In the 2007-2008 school year, the state spent approximately \$37 million related to teacher turnover (Corbell, 2009). Research conducted by The Alliance for Excellent Education (2004) established that comprehensive induction programs have a payoff of \$1.37 for every \$1 that is invested in quality BTSPs. School districts that do not offer mentor support lose an average \$8,000 per recruited teacher (Darling-Hammond & Baratz-Snowden, 2005). Investing resources of time, energy, and money into quality induction programs is a cost saving effort to combat attrition's destabilization of school culture and adverse effect on student success (Lowrey, 2012). Therefore, it is fiscally irresponsible not to directly address the high turnover rate among educators (Smith & Ingersoll, 2004).

North Carolina employed about 96,000 teachers during the 2014-2015 school year (Brenneman, 2015). Teacher attrition cost the state \$178 million last year, of which approximately \$33 million was the direct result of dissatisfied teacher resignations (Corbell, 2009; North Carolina Department of Public Instruction, 2015). The retention of new teachers is one of the most influential forces driving formal induction programs in the United States and countries around the world.

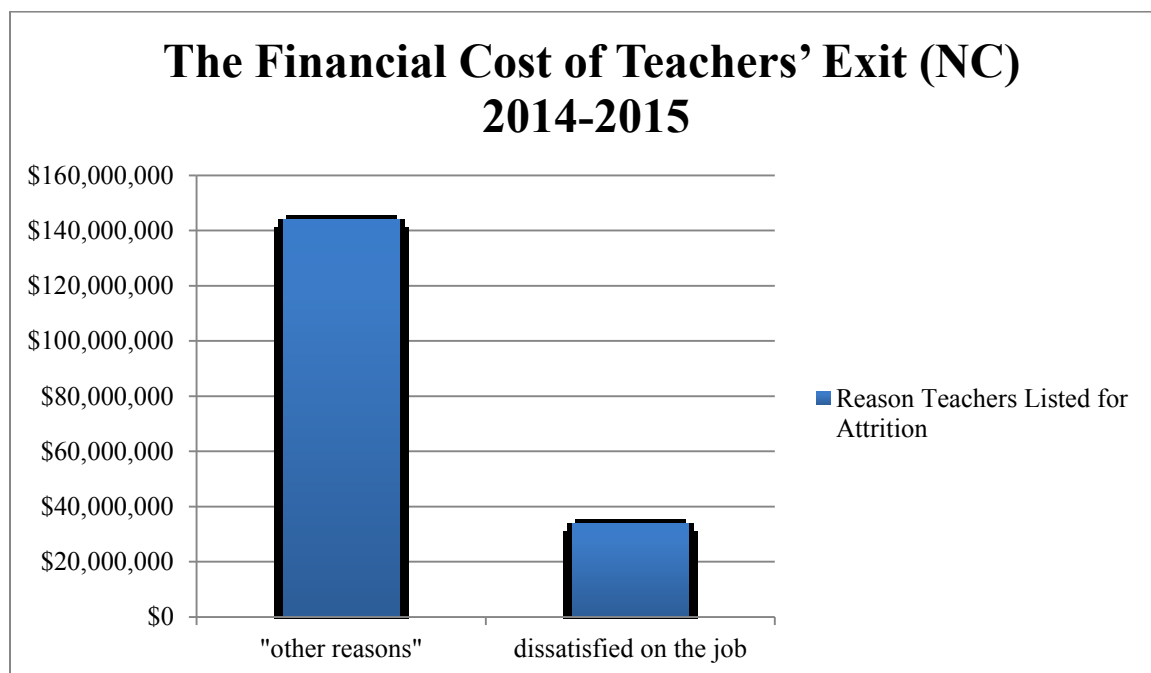


Figure 3. The Financial Cost of Teachers' Exit in North Carolina.

Causes of attrition. Teachers offer multiple reasons for leaving the profession. The most qualified educators often flee the profession in search of jobs with higher salaries, less stress, and better working conditions (Darling-Hammond, 2000; Ingersoll & Smith, 2004). Beginning teachers consistently cite “lack of support from school administration” as one of the primary reasons they left the profession (Alliance for Excellent Education, 2004; Ingersoll & Strong, 2011). USDOE (2006) surveyed teachers

with 1-3 years of experience who left the classroom in 2008. Researchers found that 28.6% of new teachers left the field to pursue a different career, 9.6% left because of dissatisfaction with an administration, and 11.7% left due to a lack of administrative support during teachers' initial years (Reeder, 2013). Ingersoll (2003) made the argument that this discontent is the reason 20-50% of teachers leave the profession by year 5. Additional insights about turnover rates are provided by smaller scale studies such as O'Brien, Goddard, and Keeffe (2008). These researchers found that by the second year of teaching, 29% of new teachers were thinking of leaving the classroom and 10% had already decided to leave. The most frequently factor cited by teachers is burnout.

Burnout. In the age of increasing accountability through high stakes testing, stress is a condition of 21st century schools. Burnout appears in the literature across more than 3 decades of research. Burnout is defined as the behavioral manifestation of emotional and physical exhaustion derived from stressful situations and events with which subjects are not adequately prepared to cope (Farber, 1984; Hoover-Dempsey & Kendal, 1984). Studies show that teaching is a stressful career that often leads teachers to suffer from burnout (McCarthy, Lambert, O'Donnell, & Melendres, 2009). It is not uncommon for beginning teachers to be expected to perform the same duties as their veteran colleagues while also learning to teach (Lesnick, Jiang, Sporte, Sartain, & Hart, 2010). This expectation results in new teachers feeling overwhelmed and less confident in their ability to cope with the demands of a stressful career. Beginning teachers are often given the classes and course loads that veteran teachers do not want, including remedial classes, courses that require multiple preparations, and classrooms with diverse learning needs (Brewster & Railsback, 2001). These pressures result in new teachers

feeling overwhelmed and isolated (Howe, 2006).

Most new teachers describe a period in their first years when theory from teacher preparation coursework does not adequately prepare them for the realities of the classroom. New teachers struggle for survival associated with taking on full-time teaching responsibilities (Bullough, 1987). Without practical and relevant support, new teachers are more likely to experience burnout, struggle to handle daily stress and pressures, and ultimately end up leaving the profession.

Policymakers attempt to resolve teacher shortage by hiring more inexperienced or first-time teachers and offering financial incentives to teach in hard-to-staff schools. “States offer alternative programs for licensure so that individuals working in the private sector can enter the teaching profession. This, however, does not fully resolve the issue of the teacher shortage” (Reinhardt, 2011, p. 4). Contrary to intent, the attrition rate of alternatively licensed teachers is double that of traditionally trained teachers (Darling-Hammond, 2000). Sixty percent of teachers who enter the career through such programs leave the field by their third year. Similarly, teachers who are drawn in by the financial incentive will succumb to the same stressors that caused the position to be “hard-to-staff” (Darling-Hammond, 2000).

Need for Induction Programs

Wong (2001) defined induction as the process of systematically training and supporting new teachers, beginning before the first day of school and continuing through the first 2-3 years of teaching. Its purposes include easing the transition into teaching; improving teacher effectiveness through professional development in classroom management and instruction strategies; promoting school culture, philosophies, missions, policies, procedures, and goals; and increasing retention rates for highly qualified

teachers (Wong, 2001). The benefits of induction support programs are threefold: reduced attrition, increased teacher retention, and increased student achievement (Arends & Rigazio-DiGilio, 2000; Darling-Hammond & Bransford, 2005; Ingersoll & Kralik, 2004). Brissie, Hoover-Dempsey, and Bassler (1988) suggested four factors perceived by teachers to lower levels of burnout: principal support, peer support, friend and family support, and classroom parent support (Whisnant, Elliott, & Pychon, 2005). The multi-level support for beginning teachers is the central idea of a quality induction program.

Induction programs should last more than the initial year of teaching (Alliance for Excellent Education, 2004; Stansbury & Zimmerman, 2000). Feiman-Nemser (2003) argued that teachers need 3-4 years to be competent in their field and even more to reach proficiency. Beginning teachers need a professional culture that supports and encourages teacher learning and development (Feiman-Nemser, 2003). In such a culture, authentic professional growth can occur as teachers collaborate with fellow novice and veteran teachers as well as reflect on their own learning. AFT (2001) reported,

Induction provides hands-on opportunities for beginning teachers to link theory of instruction learned in their teacher preparation programs with the practice of classroom teaching while under the supportive guidance of a mentor. There is little question that induction programs pay dividends in terms of teachers who are better prepared for their jobs, more confident in their professional skills, and more likely to remain in teaching. (p. 1)

Chwalisz, Altmaier, and Russell (1992) found that teachers with low self-efficacy reported higher levels of job burnout as compared to teachers with high self-efficacy. Friedman and Farber (1992) found that teachers who considered themselves poor in classroom management reported higher levels of job burnout as compared to teachers

who considered themselves as highly efficacious in management (Yu, Wang, Zhai, Dai, & Yang, 2014). Increasing teacher efficacy through a comprehensive induction program preemptively counters burnout and leads to more professional satisfaction and career longevity.

New teachers enter the profession with excitement and a thirst for advice, ideas, and support from colleagues. Induction combats a real threat to a novice teacher's confidence and skill development: isolation (Buchanan et al., 2013). Isolation can occur in several forms. Physical isolation is the feeling of being alone in the classroom without the company and support of another educator (Buchanan et al., 2013). New teachers may experience this isolation when in the presence of colleagues who withhold their encouragement. Geographic isolation refers to deployment to a rural area where professional development opportunities are less available or require considerable travel by the new teacher (Buchanan et al., 2013). This type of isolation may involve socioeconomic factors that may lead students and parents to place education as a lesser priority. The consequential lack of support from home serves as an additional stressor for a new teacher under geographic isolation. Professional isolation refers to occasions when a teacher is the only teacher of a subject in a school, teaches outside of his or her field of expertise, or is unable to access resources to reach maximum instructional potential (Buchanan et al., 2013). Physical and professional isolation are closely related (Buchanan et al., 2013). A final type of isolation, and perhaps most widespread, is emotional isolation. "Emotional isolation is the feeling of separateness that comes with struggling on one's own, of not succeeding and not admitting to needing help or wanting to ask for it" (Buchanan et al., 2013, p. 122). Isolation is a major contributing factor to teacher burnout and attrition. Induction programs implemented to address retention must

address and eradicate each type of isolation experienced by beginning teachers.

Programs that effectively empower new teachers are diverse in structure, developmental in nature, and designed from the philosophical orientation of assisting novice teachers in the identification of their needs and subsequently providing access to resources to meet those needs (Runyan, 1991). Research spotlights the most frequently cited issues with which beginning teachers struggle during their initial years in the classroom: (a) adjusting to full-time teaching demands; (b) managing colleague and parent relationships; (c) understanding the cultural contexts of the school; and (d) coping with the clash between theoretical expectations developed in preservice training and the realities of the modern classroom (Buchanan, 2006; Ewing & Smith, 2003; Fetherston & Lummis, 2012). Teacher quality is a strong indicator of student success, so schools must put into place a program that will develop beginning teachers into competent and capable professionals (Reeder, 2013).

Brief History of Induction

Over the past 40 years, increased attention has been given to staffing schools and classrooms with highly qualified teachers. In the 1980s, a severe teacher shortage was predicted as the trends of rising student enrollment and increased numbers of teachers approaching retirement continued to rise (Ingersoll & Strong, 2011; Reeder, 2013). In response, school systems began focused recruitment efforts to draw people into the education field. By early 1990s, Troops-To-Teachers, Teach for America, and alternative licensing programs began to surface (Reeder, 2013). North Carolina established four Regional Alternative Licensing Centers (RALC) across the state to help people who hold at least a bachelor's degree in any field to become licensed as a teacher. Recall that lateral entry teachers depart from the profession at twice the rate of traditionally licensed

teachers (Darling-Hammond, 2000). The state acted on the assumption that over the 3 years, the person being placed in a classroom completed a teacher education program through a college, university, or RALC. Schools began offering sign-on bonuses, student loan forgiveness programs, housing assistance, and tuition reimbursement to attract potential new teachers (Ingersoll, 2001; Reeder, 2013). Leaders in education developed alternative avenues to train quality teachers in response to the teacher shortage.

Stanulis and Floden (2009) described the historical evolution of induction in five waves. Before 1986, induction programs focused on the needs of new teachers and their well-being. Induction programs were rare, mostly informal, loosely organized, and often unfunded (Stanulis & Floden, 2009). Florida established the first state-level induction program in 1978, immediately followed by seven other states (Stanulis & Floden, 2009). Induction programs during this first wave were focused on the needs of new teachers but lacked organization (Reeder, 2013). Between 1986 and 1989, the second wave brought an emphasis on mentoring, a valuable component of any comprehensive induction program (Reeder, 2013; Wood & Stanulis, 2009). Stanulis and Floden stated that 30 states had official induction programs during this second wave; however, each program had its variations from the others. The organization of induction program became more formal and began including observations and professional development opportunities for beginning teachers (Reeder, 2013).

Wood and Stanulis (2009) characterized years 1990-1996 as the third wave of induction. The Interstate New Teacher Assessment and Support Consortium (INTASC) standards for new teachers were released in 1991. INTASC standards led to more structure, formative assessment of new teachers, and standards-based observations (Reeder, 2013). Moreover, INTASC called for 100% of state-mandated induction

programs to include a mentoring component. Unfortunately, many of these programs were abandoned due to lack of funding (Reeder, 2013).

The fourth wave of induction programs occurred from 1997 to 2006 (Reeder, 2013; Wood & Stanulis, 2009). During this wave, induction programs became more comprehensive and structured. High-quality programs acknowledge the value of mentoring, professional development, and formative assessment (Reeder, 2013). Years 2006 to present represent the fifth wave of induction in the United States. The No Child Left Behind (NCLB, 2001) initiatives emphasized teacher accountability with a focus on teacher effectiveness and student learning (Reeder, 2013). Induction programs have evolved to become more specialized and subject-based while maintaining focus on differentiation of instruction to maximize student achievement.

The past 3 decades' research on effective teaching and student learning provides clear evidence that teacher quality is the most important variable in student achievement (Darling-Hammond & Bransford, 2005; OECD, 2005). According to Ferguson (1991), teacher quality accounts for 43% of a student's performance and achievement. Teacher quality is such an important factor in raising student achievement, it necessitates training and support of new teachers through quality induction programs (Alliance for Excellent Education, 2004; Ingersoll & Strong, 2011).

Teacher Self-Efficacy

The theoretical foundation of self-efficacy is rooted in Social Cognitive Theory, developed by Bandura (1977, 1997). Social cognitive theory assumes that people choose courses of action based on a dynamic interplay between external and internal forces as well as current and past behavior (Henson, 2001). Bandura (1997) defined self-efficacy as a person's belief in his or her capacity to organize and execute the appropriate

action(s) to produce the desired result. “Bandura (1997) proposed that because self-efficacy beliefs were explicitly self-referent in nature and directed toward perceived abilities given specific tasks, they were powerful predictors of behavior” (Henson, 2001, p. 3). Self-efficacy theory is a common theme in current views of motivation (Graham & Weiner, 1996), primarily because of its predictive power and application for practically any behavioral task (Henson, 2001).

Education researchers offer their own conceptualization of teacher self-efficacy. Guskey and Passaro (1994) described it as “the teachers’ belief or conviction that they can influence how well students learn, even those who may be difficult or unmotivated” (p. 628). Similarly, Tschannen-Moran and Hoy (2001) defined teacher efficacy as a teacher’s “judgment of his or her capabilities to bring about desired outcomes of student engagement and learning, even among those students who may be difficult or unmotivated” (p. 1). Each definition references the power of teacher beliefs in themselves and their capacity to positively influence all students.

Teacher self-efficacy impacts student outcomes of motivation, achievement, and student efficacy. Guskey and Passaro (1994) noted that people with negative self-efficacy do not expend effort to pursue unlikely attainable goals because they perceive their efforts will be futile. Teachers with positive self-efficacy about their own ability to teach increase student achievement and motivation (Ashton & Webb, 1986; Grant, 2006). Efficacious teachers see student learning as an attainable, highly valued goal. Teachers who believe in their ability to teach usually develop a “whatever it takes” attitude toward instruction.

When peering through the lens of educational reform that impacts student achievement, the development of self-efficacy in beginning teachers plays a vital role in

teacher preparation and support. Ashton and Webb (1986) described a link between high efficacy and efforts to create caring and meaningful relationships with students; the belief that students who are treated fairly, firmly, and with consistency will behave well; and the use of calm, rational management strategies. The researchers also report that high efficacy beliefs correlate with a reluctance to embarrass students and an expressed effort to treat all students as being trustworthy and possessing the potential to learn. Teachers with perceptions of high self-efficacy tend to focus on instruction and the value of student learning, an effort to keep students cognitively engaged, and a desire to monitor all students' progress (Ashton & Webb, 1986). Highly self-efficacious teachers demonstrate a resolve not to accept student failure (Ashton & Webb, 1986).

The study of self-efficacy development in novice teachers is critical because Bandura (1997) asserted that efficacy beliefs develop in early years of teaching and, once established, are unlikely to change. Teacher efficacy forms early in preservice experience and the early years of teaching, remaining relatively stable thereafter (Woolfolk Hoy & Burke-Spero, 2005). Bandura (1997) postulated that teacher self-efficacy beliefs are derived from four sources: (a) verbal encouragement of colleagues, supervisors, and administrators (verbal persuasion); (b) success or failure of other teachers who serve as models for new teachers (vicarious experiences); (c) perceptions of past experiences of teaching (mastery experiences); and (d) level of emotional and physiological arousal experienced as they anticipate and practice teaching.

Palmer (2011) examined the sources of self-efficacy and the effectiveness of a teaching intervention in science education. Palmer's published results supported the notion that cognitive mastery (perceived success in understanding the concept) is the most powerful source of efficacy information, whereas enactive mastery (past hands-on

experience) has less impact. Vicarious experiences and feedback from an expert who observed teaching during the professional learning intervention contributed to cognitive mastery which effectively enhanced participant self-efficacy in science (Beauchamp, Durksen, Klassen, Parsons, & Taylor, 2014; Palmer, 2011). Induction programs deliver the experiences, relationships, and elements to build teacher self-efficacy.

Ross and Bruce (2007) studied the effect of professional learning on the four sources of efficacy in a subject area. Researchers randomly assigned teachers to one of two groups: an experimental treatment group (in which professional development experiences intentionally nurtured all four sources of efficacy) and a control group. The treatment group's overall teacher efficacy (related to instructional strategies, student engagement, and classroom management) was stable during the study and higher than the control group. Classroom management efficacy increased by a statistically significant degree for teachers in the treatment group (Ross & Bruce, 2007). The professional learning experiences that addressed the four sources of efficacy by providing information-rich tasks, modeling, in-training practice, and debriefing experiences enhanced teacher efficacy specific to management for teaching mathematics (Beauchamp et al., 2014; Ross & Bruce, 2007).

Tschannen-Moran and Hoy (2001, 2007) postulated that novice teachers lack mastery experiences that are the most influential for raising teacher self-efficacy. Therefore, new teachers rely on verbal persuasion, vicarious experience, and physiological arousal to build their self-efficacy (Tschannen-Moran & Hoy, 2007). To counter this point, Ross and Bruce (2007) argued that the most important of Bandura's (1997) four sources of efficacy are mastery experiences. Through episodes in which teachers demonstrate to themselves that they are competent instructors, such as by

observing the progress of a difficult-to-teach student, teachers build self-efficacy. Mastery experiences are enhanced through feedback from superiors and social validation that connects the achievement outcomes to teacher actions. Due to the fact that new teachers do not have a reservoir of past experience to reflect upon, it is impertinent that professional development and feedback from principals and mentors enable the novice teacher to practice new skills and experience the satisfaction in moments of success. More effective teaching should increase the likelihood of teachers obtaining mastery experiences, the strongest predictor of self-efficacy (Ross & Bruce, 2007).

Impact of self-efficacy. Teacher self-efficacy consistently impacts teacher behaviors and student outcomes. Goddard, Logerfo, and Hoy (2004) wrote, “Teachers’ sense of efficacy is a significant predictor of productive teaching practices” (p. 4). Compared to teachers with lower self-efficacy, teachers with a stronger belief in their instructional skills utilize strategies that are more organized and well planned (Allinder, 1994); student centered (Czerniak & Shriver, 1994; Enochs, Scharmann, & Riggs, 1995); and humanistic (Woolfolk & Hoy, 1990). Highly efficacious teachers also promote a greater advocacy among colleagues for student learning (Lesnick et al., 2010). Gibson and Dembo (1984) suggested that efficacious teachers are less likely to criticize students after a wrong answer and spend more time with students who are struggling to understand the material. Teachers with high self-efficacy regularly reflect on their teaching to improve methods (Allinder, 1994; Guskey, 1988; Stein & Wang, 1988).

Teachers who perceive themselves as highly efficacious tend to hold high academic standards, monitor all students’ progress and behavior, and focus on instruction as well as develop meaningful and warm relationships in the classroom (Ashton, Webb, & Doda, 1983). Consequently, students of these teachers earn higher achievement scores

than students of teachers with low efficacy attitudes (Ashton et al., 1983). Henson (2001) reported that teacher efficacy was predictive of achievement on the Iowa Test of Basic Skills (Moore & Esselman, 1992), the Canadian Achievement Test (Anderson, Greene, & Loewen, 1988), and the Ontario Assessment Instrument Pool (Ross, 1992). Although research shows a significant correlation between student achievement and teacher self-efficacy (Ashton & Webb, 1986), “teacher preparation and induction programs are not focusing on the self-efficacy needs of pre-service and novice teachers” (Mongillo, 2011, p. 7).

Brissie et al. (1988) examined the concept of self-efficacy closely in an investigation of the personal and situational variables that were significantly correlated to teacher burnout. Using a sample of over 1,000 elementary teachers, results indicate that teachers who have a higher sense of efficacy were less likely to report burnout (Brissie et al., 1988). Internal rewards and sense of efficacy accounted for 29% of the variance in burnout $p < 0.01$ (Brissie et al., 1988). This finding supports the notion that perceptions of self-efficacy may play a critical role in lessening the likelihood of teacher burnout due to the confidence an effective teacher possesses in his/her ability to handle challenging situations (2001). “Included in Bandura’s description of efficacy is the belief that one is capable of coping effectively with what comes one’s way” (Brissie et al., 1988, p. 111). If high-quality induction programs positively affect new teachers’ self-efficacy, the literature suggests the effect will positively impact teacher retention (Lowrey, 2012; Swearingen, 2009). This information is particularly meaningful in urban areas where teacher attrition is highest. Brissie et al. argued that more attention should be paid to teacher perceptions of efficacy in an effort to reduce teacher experience of burnout.

Miller (2012) provided a summary explanation of the effect self-efficacy seems to

have on teachers:

In general, teachers with a high sense of self-efficacy show greater openness to new ideas and more willingness to try new methods if these are better suited to the needs of students. It is also believed that it helps teachers to plan and better organize their classes, spend more time and energy with students who are struggling in their learning, express greater enthusiasm for teaching, and feel more committed to their profession. Self-efficacy is a belief of teachers, which ultimately affects their teaching practice and their attitude toward the entire educational process. (p. 31)

Teachers with positive attitudes toward education, a firm belief in their ability to impact student lives, and a passion for teaching that is fueled by intrinsic reward are lifetime teachers.

Impact of Induction on Attrition

Throughout the world, educational leaders recognize the essential nature of providing well-planned, purposeful, and sustained professional support to novice teachers as a means of maintaining a healthy, consistent teacher workforce (Johnson et al., 2005; Whisnant et al., 2005). The professional learning communities that exist to support new teachers within high-quality induction programs are acknowledged in literature as beneficial in retaining beginning teachers beyond the fifth year of their career (Buchanan et al., 2013; Clarke & Hollingsworth, 2002; Le Cornu & Ewing, 2008). In a 2000 study conducted by the National Center for Education Statistics, the attrition rate of new teachers who received induction support was 15%, compared with an attrition rate of 26% for beginning teachers who did not receive any induction support (Whisnant et al., 2005).

Brissie et al. (1988) examined relationships between individual and environmental elements believed to be sources of burnout in teachers using stepwise multiple regression analysis. Researchers qualitatively assessed 1,213 elementary teachers across eight districts in rural, urban, and suburban areas (Brissie et al., 1988). Brissie et al. found that self-efficacy could predict the job burnout level of teachers (Evers, Brouwers, & Tomic, 2002). Brissie et al. wrote, “Results suggest that perceptions of self-efficacy in teaching may be importantly involved in decreasing the likelihood of burnout” (p. 111). Similarly, in Glickman and Tamashiro’s (1982) study of first-year, fifth-year, and former teachers’ self-efficacy perceptions, the former teachers reported a lower degree of self-efficacy than either group of teachers who remained in the profession. This study contributed to the literature that suggests teachers with low self-efficacy could experience a higher degree of job burnout and were more likely to leave the profession (Yu et al., 2014).

Chicago public schools evaluated the city’s new teacher support plan. New teachers who had a strong, professional relationship with a mentor were twice as likely to report a desire to remain in the field (Kapadia, Coca, & Easton, 2007). Teachers who received authentic support from administrators and colleagues were three to four times more likely to want to remain in education (Kapadia et al., 2007). A similar study in Santa Cruz reported a retention rate 32 points higher than the national average and 12 points higher than California’s state average, following the implementation of new teacher induction support (Kapadia et al., 2007).

Research shows that teachers with no induction support are twice as likely to abandon their new career within the first 3 years of teaching (Baccalaureate and Beyond Longitudinal Study 1992-1993, referenced in *Projects in Education*, 2000). Not only are teachers more likely to stay in teaching with induction support, but these teachers also

move more quickly beyond the issues of classroom management to focus on quality instruction (NCTAF, 1996; Villar, 2004). Most often cited reasons for leaving the education field have been associated with weak socialization structures in schools, marked by a “sink or swim” mentality (Maciejewski, 2007; Smith & Ingersoll, 2004). It stands to reason that building strong socialization structures through a comprehensive induction program for the newest members of the profession addresses the major cause of attrition.

For several decades, school systems have turned to new teacher induction as a potential solution to teacher burnout and high attrition. Ingersoll (2004) found empirical support for the claim that induction program elements, especially mentoring, have a positive impact on teachers and their retention (Ingersoll & Kralik, 2004; Whisnant et al., 2005). In a review of 10 induction program studies, one study involved the collection of retention data for two groups of teachers: those who participated in a year-long program for first-year teachers and the retention rate for all beginning teachers within the state (Ingersoll & Kralik, 2004). Four years after their mentoring experience, 88% of the participants in the program were located and surveyed. While the statewide attrition data for novice teachers averaged over 9% per year, the turnover rate for participants in the mentoring program was 4% for 4 years (Ingersoll & Kralik, 2004; Whisnant et al., 2005).

Ingersoll and Kralik (2004) also reviewed a published study of the Montana BTSP. Researchers found significance in a 2-year comparison of retention rates for mentored and non-mentored beginning teachers (Ingersoll & Kralik, 2004; Whisnant et al., 2005). By their second year of teaching, 92% of mentored teachers remained in the school system compared to 73% of non-mentored teachers (Ingersoll & Kralik, 2004). When evaluating retention of teachers between year 2 and year 3, 100% of mentored

teachers remained, but only 70% of non-mentored teachers stayed in the district (Ingersoll & Kralik, 2004).

While some researchers claim that effective induction programs reduce high teacher turnover (Ingersoll & Strong, 2011; Wood & Stanulis, 2009), an extensive review of the literature reveals a contradiction. The key word is “effective” induction programs reduce teacher turnover. “Overall, the lesson to be learned is that, under certain conditions, mentoring and induction are associated with increased new teacher satisfaction and retention” (Johnson et al., 2005, p. 89). A discussion of essential elements present in a comprehensive, high-quality induction program will be discussed in a subsequent subheading, “Best Practices.”

Impact of Induction on Student Achievement

Research indicates that BTSPs which blend orientation, mentoring, professional development, and evaluation consistently develop highly qualified teachers who positively impact student achievement (Alliance for Excellent Education, 2004; Brewster & Railsback, 2001; Wood & Stanulis, 2009). Teachers who score high on teacher efficacy measures are more likely to try new instruction strategies, particularly techniques that are difficult and involve risks. The use of such strategies enhances student achievement (Ross & Bruce, 2007).

A significant correlation exists between teacher quality and student academic success (Friedrichsen, Chval, & Teuscher, 2007). Highly qualified teachers who are skilled, knowledgeable, caring, and culturally perspicacious are the strongest indicators that students achieve their greatest academic potential (Breux & Wang, 2003). According to researchers Breux and Wong (2003), a successful induction program is one that subscribes to the philosophy that the better trained teachers are, the higher the

level of student achievement will be. “Therefore, induction programs designed to help train beginning teachers help increase teacher confidence and competence, which can result in increasing student performance” (Reinhardt, 2011, p. 12). A comprehensive induction program nurtures new teachers so they become more effective, quicker. In turn, student achievement rises and states get a return on the investment into the new teacher induction support program.

School districts that provide high-quality induction programs report higher test scores, which in turn reflects well-prepared and supported teachers (Brewster & Railsback, 2001; Ingersoll & Strong, 2011). Researchers who evaluated the Santa Cruz/Silicon Valley New Teacher Project report 27-33 percent points growth in achievement for the students of teachers who had intensive induction for 2 consecutive years when compared to student scores of teachers who received only 1 year of induction (Fletcher, Strong, & Villar, 2005). A federally funded randomized controlled study reported that beginning teachers who received 2 years of induction services produced greater gains in student scores when compared to those teachers who received little or no induction support (Fletcher et al., 2005). These gains are equivalent to a student moving from the 50th to 58th percentile in math and from 50th to 54th percentile in reading in a single academic year (Fletcher et al., 2005). Similarly, Glazerman et al. (2010) conducted a controlled study of teachers in districts with comprehensive 2-year induction programs and noted the average student scores increased by four percentile points in reading and eight percentile points in math (Reinhardt, 2011). “This demonstrates that the impact on reading and math scores were positive and significant by the third year” (Reinhardt, 2011, p. 54).

Teachers who feel valued are more likely to participate in a professional learning

community at their school and receive professional development to build necessary skills. In turn, teachers feel more confident and satisfied in their career. Teacher job satisfaction can directly impact the quality of instruction (National Center for Education Statistics, 1997). When teachers are satisfied with their job, they are typically motivated to work harder, which leads to an increase in student learning and achievement (Reeder, 2013). Positive working environments facilitate learning through teacher empowerment, establishing a safe learning space and fostering a supportive school culture (Hirsh, Emerick, Church, & Fuller, 2006). North Carolina teachers voice the same chorus heard around the country: Student achievement increases when teachers feel empowered and experience professional autonomy (Reeder, 2013). Based on the findings from the 2006 North Carolina Teacher Working Conditions Survey (NCTWCS), Hirsh et al. (2006) concluded that working conditions, specifically teacher attitudes and confidence, directly relate to student learning conditions.

Instructional Strategies

Teacher beliefs about their efficacy have been shown to directly impact their instructional practices (Graham, Harris, Fink, & McArthur, 2001). Teachers who have confidence in their ability are more likely to try innovative instructional strategies, whereas teachers with low self-efficacy are not (Rubie-Davies, Flint, & McDonald, 2012). Effective teachers facilitate student learning through interactive instruction and a variety of instructional methods. The use of multiple strategies is vital to the enhancement of student learning because there is a greater likelihood of meeting various learning styles and maintaining student engagement (Jeck, 2010). Low socioeconomic students and at-risk students are just as likely as any other student to benefit from a variety of instruction, particularly student-centered activities (Anderson & Krathwohl,

2001; Gardner, 1993; Marzano, Pickering, & Pollock, 2001; Von Seeker & Lissitz, 1999).

Bloom and Krathwohl (1956) identified six levels of cognition associated with the learning process. These levels became known as Bloom's Taxonomy and range from the lowest degree of cognition (knowledge and comprehension) to the highest levels where most authentic learning takes place (application, synthesis, and evaluation). Students learn new information in different ways, process information differently, and are motivated differently (Jeck, 2010). Bloom and Krathwohl reported that the majority of classroom instruction is limited to the lowest cognitive levels. Students are more likely to retain and comprehend information that is taught at higher end levels, specifically synthesis, evaluation, analysis, and application (Garavalia, Hummel, Wiley, & Huitt, 1999). Without a variety of instructional methods, students are likely confined to lower levels of cognition where teachers "cover material" rather than encourage active learning experiences (Fried, 2005).

Gardner's (1993) research about multiple intelligences describes the importance of teacher use of multiple teaching strategies. Based upon Bloom and Krathwohl's (1956) earlier work, Gardner studied various styles in which individual learners learn best. Gardner referred to individual learning styles (interpersonal, intrapersonal, verbal-linguistic, logical-mathematical, naturalistic, visual-spatial, and musical) and emphasized that identifying varying learning styles and providing differentiated instruction based on student needs enhance student learning (Jeck, 2010).

Cunningham and Nogle (1996) examined specific classroom instructional strategies and found that employing a variety of strategies significantly increased student achievement (Jeck, 2010). Cunningham and Nogle found that variability in the

utilization of strategies such as (a) warm-up games, (b) cooperative learning groups, (c) large-group discussions, (d) interactive lectures coupled with discussion, (e) peer teaching, (f) guided practice activities, (g) discovery methods, (h) creative projects, and (i) the use of games and puzzles significantly increased student achievement levels among students.

Marzano examined classroom observation data from over 100 studies and more than 4,000 control groups (Marzano, 1998; Marzano, Gaddy, & Dean, 2000; Marzano et al., 2001). Marzano's studies reinforced the works of Gardner (1993) and Bloom and Krathwohl (1956) and demonstrated how specific strategies impact student-learning most. Nine instructional practices most often utilized by teachers were identified during the meta-analysis. These nine practices are known as Marzano's high-yield instructional strategies (Marzano, 1998; Marzano et al., 2000, 2001): (a) identifying similarities and differences; (b) summarizing and note taking; (c) reinforcing effort and providing recognition; (d) homework and practice; (e) nonlinguistic representation; (f) cooperative learning; (g) setting objectives and providing feedback; (h) generating and testing hypotheses; and (i) questions, cues, and advanced organizers. Marzano's high-yield strategies align to Bloom's Taxonomy and produce more academically successful students (Jeck, 2010; Marzano, 1998; Marzano et al., 2000). Marzano's high-yield instructional strategies empower teachers to disregard the old myth about at-risk students' inabilities to think at higher levels and respond to a variety of instructional strategies designed to challenge students at higher cognitive levels along Bloom's Taxonomy (Jeck, 2010; Marzano et al., 2000).

Significance of instructional strategies. State standardized testing accountability programs have driven recent educational reform efforts. Multiple-choice

assessments have been adopted in all 50 states and the District of Columbia (Jeck, 2010).

As a result, schools have resorted to a “teach to the test” mentality. A one-size-fits-all approach to instruction to quickly cover a lot of material has led to most instruction at Bloom’s lowest levels of cognition: knowledge and comprehension (Jeck, 2010).

“Teachers perceive massive pressure to cover all of the material while the administration encourages multiple-choice benchmark assessments that mirror state tests” (Jeck, 2010, p. 19). Teaching to the test while utilizing instructional strategies that emphasize lower cognition levels (knowledge and comprehension) are causing many of our students to fall further and further behind.

In 2006, Bridgeland, Dilulio, and Morison published a report entitled *The Silent Epidemic*. According to these researchers, 69% of teenagers cited boredom and lack of challenging, relevant instruction as the main reasons for dropping out of school. Further down the list of reasons is instructional rigor (Bridgeland et al., 2006). Therefore, the difficulty of work is not a frequently reported reason for dropping out of school. The delivery of instruction results in boredom, which in turn influences teen decisions to leave school before graduation (Bridgeland et al., 2006). Teachers react to the pressures of high-stakes testing by quickly covering a large amount of material and administering multiple-choice assessments that mirror state-standardized tests (Jeck, 2010). These practices lead to boredom in the classroom: the number one cited reason for dropping out of high school (Bridgeland et al., 2006).

Research offers strategies for combating student tedium and elevating student achievement, strategies that include the utilization of a variety of instructional methods, and instructing students at various cognitive levels (Bloom & Krathwohl, 1956; Jeck, 2010; Marzano et al., 2001). “Research indicates that students learn best when a

cognitive taxonomy is applied to classroom instruction, which challenges students to consider and respond to information at higher cognitive levels” (Jeck, 2010, p. 7).

Teachers who use multiple tools and methods of instruction are more likely to address students’ diverse needs and learning styles. Students are more engaged, receptive of new information, retentive of new knowledge, and find school less boring. Ultimately, students are more likely to remain in school until graduation.

Instructional strategies and efficacy. Teachers who do not believe that they possess the ability to facilitate high levels of learning in all students may fail to utilize a variety of instructional strategies due to their perceptions about themselves and their students. As previously discussed, these beliefs in one’s ability to effectively teach are known as self-efficacy. The relationship between self-efficacy and variability of instructional strategies is difficult to measure. There is a lack of research linking efficacy to use of instructional variability and the resulting benefit to students beyond that which can be explained by other variables (Jeck, 2010). It is logical to assume that teachers with high self-efficacy vary instruction experiences more than teachers with low self-efficacy, but this assumption has not been validated through empirical research (Jeck, 2010). Research validates that a variety of instructional methods benefit students and help avoid boredom in the classroom.

The practice of using a variety of instructional strategies is influenced by multiple factors including teacher experience, teacher education levels, class size, and student socioeconomic status (SES). There is little research linking efficacy and the degree to which it is related to variability in instruction methods, yet it is reasonable to argue that self-efficacy is a positive and desirable trait in a teacher (Jeck, 2010). Teacher self-efficacy is an important predictor of high academic achievement in all students (Ashton

& Webb, 1986; Bandura, 1993; Goddard, Hoy, & Woolfolk Hoy, 2004). Teachers with higher levels of efficacy are more likely to implement higher order instructional strategies than teachers with lower levels of efficacy (Davies, 2004). Highly efficacious teachers tend to use more innovative instructional strategies and believe that all students can learn on higher cognitive taxonomy levels (Anderman, Patrick, Hruda, & Linnenbrink, 2002; Davies, 2004; Rubie-Davies, 2008). It stands to reason that the result of highly efficacious teachers' greater likelihood to use a variety instructional methods results in meeting a variety of learning styles and needs in a diverse class. As research has validated, using multiple, innovative instructional delivery methods yields higher academic success rates (Marzano, 1998; Marzano et al., 2000, 2001).

Student Engagement

Student engagement focuses on the identification of variables that threaten student functionality in a classroom beyond demographic risk factors such as SES. Engagement is defined as a concept that requires positive relationships between adults and students and among peers in addition to active student behavior such as good attendance, effort, and prosocial behaviors (Furlong & Christenson, 2008). Researchers define student engagement in different ways in the literature; however, there is a consensus that engagement is a relevant and multidimensional construct that integrates student thoughts, emotions, and behaviors (Fredericks, Blumenfeld, & Paris, 2004; Furlong, Whipple, St Jean, Simental, & Punthuna, 2003). Many researchers use a three-part typology that emphasizes affective, behavioral, and cognitive dimensions of engagement (Finn, 1989; Fredericks et al., 2004; Jimerson, Campos, & Greif, 2003). Educators, however, typically focus on academic engaged time (time on task) or academic learning time (the amount of time engaged in an academically relevant experience) when identifying a student's

inability to succeed in school (Furlong & Christenson, 2008). Therefore, student engagement may be viewed as a four-part construct, considering the degree to which students are engaged academically, behaviorally, cognitively, and affectively (psychologically) at school and with learning (Furlong & Christenson, 2008).

Furlong and Christenson (2008) defined each dimension of engagement typology. Academic engagement refers to the amount of time a student spends on completing schoolwork in the classroom or at home, the number of credits the student accrues, and the amount of homework completed. Behavioral engagement refers to attendance, active participation and discussion in class, and involvement in extracurricular activities. These two dimensions are observable and require little or no inferences by the researcher. Cognitive engagement is defined as the extent to which students believe school impacts future plans. This notion includes an interest in learning, goal setting, and self-regulation of performance (Furlong & Christenson, 2008). Affective engagement refers to how well the student feels he or she belongs and connects with parents, teachers, and peers. Cognitive and affective engagement are less observable and subject to adult inferences about student internal perceptions.

Wentzel (1998) explained that engagement is not a student trait but rather a state of being that is impacted by home, school, and peers in relation to the capacity of each to support student achievement. Contextual factors that influence a student's capacity for learning may be divided into two categories: indicators of engagement and facilitators of engagement. Indicators express a student's level of connection with their school and learning such as attendance patterns, accrual of credits, and perceived competence (Furlong & Christenson, 2008). Facilitators of engagement are factors that strengthen a student's connection with school and learning such as discipline policy, parental

involvement in homework, and peer attitudes toward academic success (Furlong & Christenson, 2008). Facilitator factors imply interventions, whereas indicators of engagement may be used to identify procedures such as initiating referrals at the first sign of withdrawal and progress monitoring of the student and programs (Sinclair, Christenson, Lehr, & Anderson, 2003). “Facilitators are protective factors-what guides the specific content and contextual support provided to students of concern” (Furlong & Christenson, 2008, p. 366).

Significance of student engagement. Inexperienced teachers need support to build efficacy in engaging students in active learning. Student engagement has authentic, practical applications in education. Researchers have considered engagement to be (a) the primary theoretical model for understanding and intervening with students at risk for dropping out of high school; (b) the foundation of school reform initiatives that focus on developing student perceptions of competence and control, personal goals, and sense of belonging with peers and teachers (National Research Council and Institute of Medicine, 2004); (c) interrelated with the construct of motivation to learn (Appleton, Christenson, Kim, & Reschly, 2006); and (d) applicable to all students (Furlong & Christenson, 2008). According to a 2006 study in which 81,499 students (Grades 9 to 12) from 110 schools in 26 states responded to the High School Survey of Student Engagement, students reported being less engaged during all high school years if they were male; from an ethnic group other than White or Asian; in a lower SES level; or in special education rather than vocational, general education, or advanced classes (Yazzie-Mintz, 2007). More than 25% of students reported not being engaged. These results suggest that all schools have students who are disengaged, apathetic, or discouraged learners, including schools without demographic-related risks (Brophy, 2004). Student engagement is a key issue to

all educators, especially inexperienced teachers who need support to build efficacy in engaging students in active learning.

Engaging students is a challenge for all educators, regardless of experience. Research that spans several decades shows that students become less engaged at school as they move from elementary to middle to high school (Marks, 2000; McDermott, Mordell, & Stolfus, 2001). By high school, as many as 40-60% of students are chronically disengaged from school, excluding those who have already dropped out of school (Klem & Connell, 2004). In a 2004 research study conducted by Klem and Connell involving six elementary schools, three middle schools in an urban school district, roughly one third of elementary (35%) and middle school students (31%) were identified as disengaged from school. Researchers collected student self-reports as well as teacher reports concerning levels of engagement for students. In both elementary and middle levels, the percentage of teacher-identified cases of disengagement were significantly lower than student self-reports. This variation may be due to a difference in the measurement tool. Teachers report observable behaviors (academic and behavioral engagement) while students report both behaviors and feelings (Klem & Connell, 2004).

Research supports the idea that student engagement is a strong predictor of student achievement regardless of SES (Finn, 1989, 1993; Lee & Smith, 1999; Voelkl, 1995). Klem and Connell (2004) explained that when elementary students self-reported high levels of engagement, they were 44% more likely to do well and 23% less likely to do poorly on the performance and attendance index. On the other hand, students with low levels of self-reported engagement were 30% more likely to do poorly and 44% less likely to be at optimal levels on the Student Performance and Commitment Index (SPCI). Elementary students who were identified as highly engaged by teachers, using the

Research Assessment Package for Schools (RAPS), were twice as likely to do well on the performance and attendance index and 39% less likely to do poorly on the index than students identified as minimally engaged (Klem & Connell, 2004). Elementary students who teachers identified as showing low levels of engagement were 39% more likely to do poorly on the SPCI and 56% less likely to demonstrate consistent patterns of attendance and academic performance (Klem & Connell, 2004).

A similar pattern was evident for middle school student self-reports, with highly engaged students being 75% more likely to do well on the performance and attendance index and 23% less likely to do poorly on the index (Klem & Connell, 2004). Middle schoolers who self-reported low levels of engagement were 27% more likely to do poorly and 37% less likely to do well on the SPCI (Klem & Connell, 2004). Based on teacher identification, middle schoolers observed to be highly engaged were more than twice as likely to do well on the attendance and performance index and 67% less likely to do poorly on the SPIC. Middle school students who were identified by teachers as disengaged were 83% more likely to do poorly on the SPCI and 81% less likely to show high levels of attendance and academic achievement (Klem & Connell, 2004). The relationship between engagement and academic success is evident in elementary, middle, and high schools and reminds the education community that student engagement is a relevant and significant issue that affects every school.

Best practices and student engagement. The concept of student engagement requires attention to both academic and social aspects of school life to help students be successful. This notion is particularly relevant for students at risk of failure who show signs of withdrawal from learning or lack of motivation (Furlong & Christenson, 2008). McPartland (1994) designed an organizing framework for general interventions to

increase student engagement. McPartland wrote his recommendations to increase student engagement, based on the nature of the school goals (academic or social) and the nature of the concern (within or out of school experiences) to yield four recommendations for intervention (Furlong & Christenson, 2008; McPartland, 1994). This framework reinforces the understanding that student performance in school is influenced by the context, including instructional support from teachers and the academic and motivated home support for learning (Christenson & Thurlow, 2004). To address academic concerns through in school experiences, McPartland suggested creating opportunities for success in schoolwork, beginning at the student's current ability level. Additionally, school personnel should communicate the relevance of schooling to the student's future ambitions. In the social realm, McPartland emphasized the importance of a caring and supportive school environment. He added that teachers should help students with personal problems because this is necessary to help students reach social goals.

Given that school personnel cannot alter family circumstances (e.g., income or mobility), the focus on alterable variables, including the development of students' perceived competence, personal goal setting, and interpersonal relationships to offer students optimism for a positive outcome are critical for school-based intervention efforts. (Furlong & Christenson, 2008 p. 366)

Although there is a lack of consensus on an exact definition of student engagement (Klem & Connell, 2004), researchers agree that it is crucial to student success. Induction programs cannot ignore such a critical element to student success. Classroom experiences must engage students with a variety of activities, student involvement, enthusiasm for learning, and high expectations for all students (Taylor & Parsons, 2011). New teachers must be trained to identify indicators and facilitators of

student engagement. The alarming rate of student disengagement from learning and the striking probability of failure and dropout rates associated with that disengagement necessitates high-quality induction programs that equip beginning teachers with the capacity to identify and intervene when student engagement is an issue. Research indicates that student engagement is an issue that extends beyond demographic risk factors into every type of school in the country. Engagement is such a significant predictor of student achievement; it is an issue that new educators and induction program facilitators cannot ignore.

Classroom Management

Classroom management has been historically viewed in terms of the actions taken by a teacher to establish and maintain control of the classroom environment. In the last 10 years, the literature reflects a growth in the concept of effective classroom management that extends beyond maintaining order and control (Evertson & Weinstein, 2006; Martin & Sass, 2010). Whether viewed through an historical or modern lens, researchers agree on tasks included in the domain of classroom management (O’Neil & Stephenson, 2011). These tasks include

- organizing, allocating, and arrangement of resources (Brophy, 1988; Doyle, 2006);
- establishing and enforcing rules, routines, expectations, and procedures (Brophy, 1988; Doyle, 2006; Evertson & Weinstein, 2006);
- gaining and maintaining student attention and monitoring engagement (Brophy, 1988; Doyle, 2006; Evertson & Weinstein, 2006; O’Neil & Stephenson, 2011);

- facilitating student socialization (Brophy, 1988; Doyle, 2006; Evertson & Weinstein, 2006; O'Neil & Stephenson, 2011); and
- intervening and restoring order when behavior becomes disruptive of learning (Brophy, 1988; Doyle, 2006; Evertson & Weinstein, 2006; O'Neil & Stephenson, 2011).

Effective teachers are experts in classroom management. Classrooms are dynamic environments where teachers and students must appropriately respond to unexpected interruptions and overlapping demands of the teacher's attention. In an average classroom, there is a multitude of learning styles, needs, behaviors, and challenges that impact how efficiently a classroom runs. To keep students actively engaged in learning, teachers are expected to observe and evaluate the classroom environment while being engaged with individual students, small groups, or the whole class (Dibapile, 2012). The teacher must teach well-planned, efficient classes that captivate students' attention, even if those students are not actively working with the teacher while the teacher attends to a smaller group. Routines, procedures, and expectations guide students and provide a predictable environment that offers a psychological safety (Lewis, Romi, Qui, & Katz, 2005). New teachers must quickly develop the vital skills for effective management so that learning can occur, despite the many demands of the teacher's time and attention. Therefore, high-quality, well-planned and executed induction experiences are critical to supporting new teachers' development of management skills.

In recent years, student socialization has become included under the umbrella of classroom management. Brophy (2006) explained that student socialization tasks include

“actions taken to influence personal or social attitudes, beliefs, and behavior” (p. 17). Expectations and desirable behaviors must be taught, modeled, and reinforced to individual students and the whole class (Brophy, 2006; O’Neil & Stephenson, 2011). The goal of the construct of management is to foster improved self-discipline in students and connectedness to school by improving relationships with teachers and peers (McPartland, 1994; O’Neil & Stephenson, 2011). Classroom management facilitates student engagement. As previously discussed within the student engagement section of this literature review, research has shown a strong relationship between student perceptions of connectedness and student achievement. Freiberg and Lapointe (2006) encourage educators to be cognizant of the link between strong student-teacher and student-peer relationships as preventative factors against such detrimental behaviors as drug abuse and violence. The broader definition of classroom management that includes the recent addition of student socialization prepares tomorrow’s citizens for productive participation in society (Bear, Cavalier, & Manning, 2005).

Significance of classroom management. A direct relationship between classroom management and student engagement is undeniable. Klem and Connell (2004) found that highly engaged students perceived their instructors as caring and supportive and their classroom environment as well structured with high expectations. Wang, Haertel, and Walberg (1993) determined that of 28 variables that can impact student learning, classroom management had the most influence on student learning compared to other factors such as cognitive ability or school demographics. On the contrary, when classrooms are mismanaged, the available time for instruction is significantly reduced, thereby directly impacting student achievement (Brouwers & Tomic, 2000; O’Neil & Stephenson, 2011). In a classroom lacking management and order, students find it much

more difficult to focus, spend their time on task, and retain new information (Brophy, 1998; Dibapile, 2012). Well-managed classrooms become places of freedom to learn and can provide safety to students. Students activate long-term memory by attending to the teacher's instruction without being disturbed and store new information efficiently for quick retrieval in the future (Dibapile, 2012).

The ability to manage a classroom confidently appears regularly in the literature as an important element of effective teaching (Doyle, 1986; Stronge, Ward, & Grant, 2011; Tschannen-Moran & Hoy, 2001). Doyle (1986) detailed his conclusion that establishing and maintaining order and control is one of two major tasks in the classroom, the other task being learning or instruction. Teachers employ different strategies to control disruptive behaviors. Classroom management training and support for new teachers are crucial because some practices can harm students instead of helping them (Dibapile, 2012). Such practices include corporal punishment and sending students out of the classroom, which restricts access to instruction (Dibapile, 2012). Classroom management is a challenge for educators due to the complex nature of the domain coupled with the magnitude of impact on achievement. Therefore, new teachers need explicit training, modeling, and feedback on management techniques.

Efficacy and classroom management. Teachers who have a greater sense of self-efficacy are more likely to have the motivation needed to manage the learning environment effectively (Bandura, 1997; Stronge et al., 2011; Tschannen-Moran & Hoy, 2001). Teachers who effectively manage classrooms possess knowledge, skills, and a belief in their ability to make proactive and reactive decisions that maintain an environment that is conducive to learning (O'Neil & Stephenson, 2011). Teachers with high self-efficacy cope well in the face of disruptive student behavior, remain friendly,

and build trust with students which ultimately results in less undesirable behaviors (Woolfolk, Rosoff, & Hoy, 1990). Rich, Lev, and Fisher (1996) reported that in their research, teachers with greater self-efficacy assisted students in forming interpersonal relationships. Consequently, teachers with high self-efficacy are more likely to obtain positive classroom results (Rothchild, Morris, & Brassard, 2006).

Bandura (1986) suggested that teachers who doubt themselves as managers are less likely to act when disruptive situations arise, allowing self-doubt to overpower existing knowledge and skill. Teachers with low self-efficacy often verbally criticize failing students and demonstrate a general lack of patience when facing challenging circumstances (Gibson & Dembo, 1984). Ashton and Webb (1986) reported that secondary teachers' lack of confidence in their ability to manage the classroom resulted in strict punishments using authority, verbal abuse, and sending students out of the classroom during instructional time. In the same study, Ashton and Webb described classroom conditions of teachers with low self-efficacy as including "punishment, coercion, and public embarrassment" (Woolfolk et al., 1990, p. 140). These practices are proven to be detrimental to academic achievement (Dibapile, 2012). Moreover, Friedman and Farber (1992) found that teachers who considered themselves poor in classroom management reported higher levels of job burnout as compared to the teachers who considered themselves as highly efficacious in management (Yu et al., 2014). Classroom management is so impactful on student success, new teachers need to develop efficacy in this domain to be effective teachers.

Models of Induction

Many studies have been conducted over the past 25 years related to induction, and a recurring theme is how varied induction programs are from state to state and among

individual school districts within the state. Specifically, research illuminates a broad range of differences in (a) the allocation of mentors, (b) the duration of induction period, (c) the commitment to the intensity of induction services, (d) assistance with the transition for new teachers from induction to subsequent phases of professional growth, and (e) the role of higher education institutions play in induction (Banks et al., 2015).

Current research suggests the effects of induction significantly depend on the number, types, and duration of supports offered to beginning teachers. In Smith and Ingersoll's (2004) project, researchers reported that while there is a relationship between beginning teachers receiving support services and their retention rate, the strength of that correlation depends on the type of support and the number of supports received (Banks, et al., 2015). Feiman-Nemser et al. (1999) attempted to summarize three theoretical framings from the literature. Induction can be seen as a distinct learning phase in which novice teachers develop teaching skill sets. It is also a time of socialization through mentoring and collaboration. Finally, induction may be viewed as a unique phase when teachers learn their craft through daily, hands-on teaching and support. Banks et al. (2015) designed a table to help examine each frame of induction through lenses of assumption, focus, strengths, and weaknesses.

Table 1

Lenses through Which to Examine Induction

Phases	Assumption	Focus	Strengths	Weaknesses
A distinct phase of learning to teach	Novice and expert teachers are very different and induction occurs in a specified time	Concerns of new teachers and group differences (Novice versus veteran teachers)	Recognizes and values different needs within career phase context	Deficit view of new teachers and concerns, background reform-oriented foci of curricular and assessment reforms
A Socialization Process	Central role of the school in enculturation novice teachers into the profession over time	Socializing teachers into norms and values of teaching in school and profession	Recognizes the powerful and 'natural' school level enculturation that occurs for all new teachers	The school level socialization focus may or may not foster an engaged and committed stance to teacher learning
An integrated program	Structured and systematic support over a designated period of time (usually a year) will enhance three valued outcomes: teacher retention, engagement with teaching and student learning	Design features presumed to positively impact novice teachers and students	Recognizes need for deliberate and targeted support for new teachers focused on key supports Recognizes the complexity of teaching as practice and in some cases the role of curriculum reform in shaping induction	Wide variation in the intensity of induction programs means overall effects difficult to ascertain in the absence of adequate research design

(Banks et al., 2015, p. 14).

Research supports an integrated, multidimensional induction program. Ingersoll (2012) argued that teachers who received only two components of an induction program

were more likely to remain in the classroom but not significantly higher than a teacher who received no services; however, teachers who received more than four listed elements were twice as likely to stay in the job (Ingersoll, 2012). Reinhardt (2011) suggested a direct link between the number of induction supports that are offered to new teachers and the number of new teachers who remain in the classroom. According to the Schools and Staffing Survey by the National Center for Education Statistics (2004), in cases when no support was offered, 40% of teachers left. Programs that offered three support elements reduced the attrition to 28%. Offering six induction supports demonstrated a slight reduction in attrition to 24%. A program that offered eight induction supports experienced an 18% attrition rate. These results support the claim that induction programs should have more than a single component (Ingersoll & Strong, 2011); however, this study does not specify *which* components are most impactful for beginning teachers.

Induction Best Practices

Induction programs differ in multiple ways including expected duration, types of support that are offered, and degree of whole school commitment to the intensity of the program. Therefore, it is essential to explore the best practices used in the effective induction programs that develop high-quality, career teachers. Stansbury and Zimmerman (2000) referred to three types of necessary support and two distinct levels of intensity for new teachers. Supports include (a) personal and emotional support, (b) problem-focused support, and (c) critical reflection on teaching support (Stansbury & Zimmerman, 2000). The authors explained the two levels of intensity:

Low-intensity levels might include orienting new teachers, matching beginning and veteran teachers, adjusting working conditions, and promoting collegial

conversations. High-intensity supports might include selecting and training effective support providers, providing release time, developing mini-courses to address common challenges, examining evidence, networking and group observation, and providing advice. (Whisnant et al., 2005, p. 5)

In 2005, Wong, Britton, and Gansler reviewed the induction programs in five countries: Switzerland, France, New Zealand, Japan, and China. The authors emphasized that they found three attention-worthy similarities among all five countries. First, induction is well structured and based on the belief that beginning years are a crucial period in a teacher's career (Banks et al., 2015). Second, induction is based on the foundation of professional development of new and veteran teachers (mentors). Last, programs in these five progressive countries are structured based on collaborative learning among beginning teachers.

Numerous researchers have examined the components of induction programs that teachers claim as the most beneficial in meeting their needs. Ingersoll (2012) examined 15 empirical studies that focused on the effectiveness of induction program. Teachers consistently ranked having a mentor teacher from the same subject and common planning time as the most impactful elements of an induction program (Hunter, 2014; Ingersoll, 2012). A thorough look at the literature reveals four main steps that research indicates should be included in a comprehensive induction plan. The first step for beginning teachers is an orientation session to acclimate new teachers to the school and culture (Reeder, 2013; Wood & Stanulis, 2009). Orientation should take place at the beginning of the school year and last 2 or 3 days (Wong, 2004). In this phase of induction, new teachers become familiar with the school's vision, policies, procedures, duties that accompany the job, curriculum, and teacher evaluation process (Reeder, 2013; Stansbury

& Zimmerman, 2000; Wood & Stanulis, 2009). This phase offers an appropriate time for mentors to meet their assigned beginning teacher, catalyzing an environment of collaborative learning (Wong, 2004).

The next step in induction is mentoring. Mentor relationships are so impactful, many researchers cite mentoring as the most critical element of induction (Bullough, 2012; Feiman-Nemser, 2001; Ingersoll, 2004). Mentoring can appear formal or informal in so long as the mentor coaches, supports, and gives feedback to the beginning teacher (Reeder, 2013). While mentoring is a crucial part of induction, researchers warn that it cannot be the only support type offered (Alliance for Excellent Education, 2004; Ingersoll & Smith, 2004).

The third best practice in induction program literature is the provision of professional development. Training and supporting new teachers through quality professional development is a major step in raising student achievement (Alliance for Excellent Education, 2004; Ingersoll & Strong, 2011). Professional development should be engaging, sustained, rigorous, and intentional to address diverse learning needs of students (Alliance for Excellent Education, 2004; Wei et al., 2009). Professional development should occur regularly and focus on building educator knowledge, make instruction more effective, and raise student achievement (Wei et al., 2009).

The final crucial element for a high-quality induction program is evaluation and assessment (Reeder, 2013). Beginning teachers should be evaluated throughout the school year through formal and informal observations. The purpose of the evaluation is to spotlight what is working in the classroom for the teacher and to identify any areas of weakness to improve. Moreover, the induction program itself must undergo a program evaluation (Wood & Stanulis, 2009). This evaluation will offer information about any

needs of the program and areas for improvement (Wood & Stanulis, 2009).

It is important to acknowledge that induction research uncovers essential supporting conditions that must be present for induction to be effective. Multiple authors contribute to the following list of enabling conditions:

- Multi-year model
- Principals who understand the unique needs of beginning teachers
- Well-trained providers of induction support with access to resources
- Incentives for novice and veteran teachers to participate in induction activities
- Efficient coordination to cooperate with all stakeholders
- Adequate and stable funding

(Alliance for Excellent Education, 2004; Fideler & Haselkorn, 1999; Knapp et al., 2004; Stansbury & Zimmerman, 2000; Whisnant et al., 2005). If the climate and culture of a school do not support mentoring, collaborating, and growing professionally, new teachers will be unsuccessfully socialized (Banks et al., 2015).

Mentoring

Although mentoring is only one element of a comprehensive induction program (Alliance for Education, 2004; Ingersoll & Smith, 2004), overwhelming evidence of the critical nature of mentor relationships in the literature warrants a separate discussion. Such potential to positively impact new teachers necessitates an exploration of mentoring best practices. Early studies of mentoring focused on the mentor's role as support to facilitate teacher transition into and successful completion of the first year in the classroom (Whisnant et al., 2005). This initial research concentrated on the short-term practicality of mentoring as a source of new teacher support and often emphasized the emotional needs of the beginning teacher (Feiman-Nemser, 1996). Research conducted

after 2005 assumed a long-range point of view and explored the depth impact mentoring could potentially have as a tool to strengthen teachers throughout their careers (Whisnant et al., 2005). Johnson (2004) wrote, “In integrated professional cultures, mentoring is organized to benefit both the novice and the experienced teachers, and structures are in place that further facilitate teacher interaction and reinforce interdependence” (p. 159).

In a study of beginning teacher supports, the Public Education Network (2003) reported that teachers rated mentoring and peer support among the top five positive influences on teaching satisfaction. A poorly structured mentor process can have a lasting negative effect on the experiences of beginning teachers (Hansford, Ehrich, & Tennent, 2004). Ingersoll (2004) and Feiman-Nemser (2003) individually addressed mentoring experiences that are based on poor or outdated models of practice held by some veteran teachers. Poor-quality mentoring may impede new teacher growth and undermine the intended reform agenda (Whisnant et al., 2005). Darling-Hammond (2005) explained that mentors are asked to practice in new ways that are drastically different from the traditional, preconceived notion of mentoring experiences. Assuming that mentors will automatically possess the knowledge and communication skills to pave the way for a new era in mentor processes is negligent as a profession and risks the potential benefits of mentoring as induction support.

Hansford et al. (2004) cited potential mentoring pitfalls that may lead to negative effects: lack of time for adequate mentoring, poor planning of the process, an unsuccessful pairing of mentors and mentees, and a lack of understanding of the mentoring process. Educational leaders look to the literature for guidelines in structuring mentor components of new teacher induction plans. Mentoring can positively impact teachers only if mentor and mentee are willing, paired participants (Wood & Stanulis,

2009). Administration must provide effective professional development for mentors. Developing adult learners is different than the support typically given to cultivate student knowledge. Feiman-Nemser and Carver (2012) described case studies of effective mentors in action, demonstrating the role of *co-thinker* and *co-planner* as mentors assist mentees in creating, differentiating, and analyzing student data to support learning. Such an intimate, supportive role is necessary for veteran teachers to offer honest feedback that will directly improve new teacher understanding and skills. This level of a collaborative relationship is not possible without training, effort, a focus on communication skills, and successful pairing process for mentor and mentee.

After decades of research, recommendations may be made for structured mentor programs. Wood and Stanulis (2009) recommended that mentors have at least 3 full years of successful teaching experience, demonstrate a reflective quality about oneself, possess knowledge of the content of the program, and encourage personal and professional growth in their mentee (Reeder, 2013). Mentors should be empathetic to beginning teacher experiences and challenges as a means of building mutual respect and trust so both parties may be willing to share power (Wood & Stanulis, 2009). Mentors should view new teachers as “developing professional[s],” not one that needs to be “fixed” (Brewster & Railsback, 2001; Reeder, 2013).

Some researchers have offered specific suggestions to improve mentor processes. Mentors and mentees should work in the same building and teach the same subject/grade (Brewster & Railsback, 2001; Reeder, 2013; Wood & Stanulis, 2009). Johnson et al. (2005) reported that mentoring was especially positive for mentees who taught the same grade and subject as their mentor, thereby working more often with the mentor. Unfortunately, the Alliance for Excellent Education (2004) estimated that less than half

of new teachers are paired with a mentor from the same content area. Mentors should designate a regular time of sufficient duration to meet with their mentee to assist with lesson planning, reflection on teaching, and analyzing student data (Reeder, 2013; Wood & Stanulis, 2009). Furthermore, mentors should always be a teaching colleague, so as to avoid any conflict of interest when performing formal evaluations (Alliance for Excellent Education, 2004).

The role of a mentor is to deliver feedback to the assigned beginning teacher to cultivate instructional practices, reflective teaching, and job satisfaction (Feiman-Nemser & Carver, 2012). The most effective mentor endeavors are when the mentor and mentee engage in reflective dialogue about teaching and learning. The professional relationship that is developed enables honest, constructive feedback to build new teacher skill sets (Wood, 2001). To achieve this end, mentor programs should be structured to benefit both mentor and mentee; support mentors' growth as professionals; provide all resources necessary for teachers to be successful in these roles; and nurture a collaborative, positive environment in which all teachers work together.

New teacher perceptions of district-level mentor support. In North Carolina, teachers complete a survey bi-annually. The survey is known as the Teacher Working Conditions Survey and has a section dedicated to new teacher support and mentors. The following data are derived from the 2016 NCTWCS:

- new teachers in the studied district report that 28% of them never met with their mentor to develop lesson plans and 14% reported meeting once per month or less in the 2015-2016 school year;
- 20% of new teachers in the district reported never being observed by their

mentor and 41% were observed less than once per month;

- 58% of new teachers in the district never observed mastery teaching of their mentor and an additional 26% observed mastery teaching less than once per month;
- 33% of new teachers in this district did not analyze student work or assessment data with their mentor;
- 27% of the district's new teachers reported never aligning lesson plans to state curricular standards with their mentor and 17% more report doing so less than once per month;
- 22% of district's new teachers rated the impact of mentor influence on mentees' instructional strategies as "none" to "hardly any at all";
- 37% said the same for impact on the subject matter they teach;
- 33% of new teachers in the district described mentor support to identify student needs as "none" to "hardly any at all";
- 34% of beginning teachers used the same terms to describe mentor support in connecting mentees with key resource professionals;
- 80% of the district's mentors were paired with mentees in the same building; and
- only 55% of mentees were paired with mentors in the same content area.

The data implicates mentor divergence from district expectations and guidelines, calling the degree of fidelity to which mentors abide by the policies and are held accountable by the district into question.

Comprehensive Induction and Self-Efficacy

As previously noted, Tschannen-Moran and Hoy (2001) defined teacher efficacy as a teacher's "judgment of his or her capabilities to bring about desired outcomes of student engagement and learning, even among those students who may be difficult or unmotivated" (p. 1). As a teacher evolves through the first 3 years of teaching, these self-efficacy beliefs are influenced by the induction experiences provided at the school level. Increased efficacy beliefs may be due to the increased opportunities to practice specific techniques, receive feedback from supervisors, and the development of a sense of accomplishment via having real world performance experience (Elliott, Isaacs, & Chugani, 2010; McDonnough & Matkins, 2010). This conclusion tends to compliment Bandura's (1997) postulations about the four origins of self-efficacy: verbal persuasion, vicarious experiences, mastery experiences, and emotional and physiological arousal. This compels induction programs to deliver the opportunities to grow from experiences, relationships, and feedback that build teacher self-efficacy.

The intersection of teacher induction activities and individual teacher self-efficacy is critical at the school level, especially in urban schools that need highly qualified teachers the most to reduce attrition and increase student achievement (Elliott et al., 2010). These schools typically have bigger classrooms, lower achievement levels, fewer resources, and more diverse student populations, yet new teachers are most often assigned to the lowest achieving schools (Elliott et al., 2010). "Principals and other school administrators can attempt to balance the lack of classroom experience and time in the teaching profession via supervision and professional development activities targeted at individual teacher needs during the induction phase, the first three years" (Elliott et al., 2010, p. 136).

Quality induction programs impact beginning teachers' sense of self-efficacy,

which in turn influence student achievement and attrition. Many researchers point out that all induction programs are not equal and a comprehensive program is necessary to positively affect changes. Wechsler, Caspary, Humphrey, and Matsko (2012) examined the effects of induction programs in several categories, one of which was specifically teacher self-efficacy. All 1,940 teachers and 1,300 mentors surveyed were compared based on the quality of induction they received. The results emphasize the significance of quality induction as it relates to increasing teacher self-efficacy (Hunter, 2014; Wechsler et al., 2012). Wechsler et al. identified three components as most likely to increase teacher self-efficacy. “Three elements of induction stand out when looking at the relationship between new teacher induction and increased teacher self-efficacy: collaboration, relationship building, and instructional focus” (Hunter, 2014, p. 45).

Challenges to Comprehensive Induction

Despite overwhelming evidence of induction programs’ positive impact on beginning teachers, state policies governing new teacher support vary widely. The literature emphasizes multiple sources of support for novice teachers to accelerate teacher development, reduce attrition, and to significantly impact student learning (NTC, 2013). Nevertheless, “many states that mandate induction do so in the absence of key policy elements like dedicated funding, strong program standards or mentor selection and training requirements” (NTC, 2013, p. iii). This begs the question: If educator leaders know best practice regarding induction, why does such discrepancy exist between the effectiveness of BTSPs?

In the United States, induction is regulated by each state. Therefore, funding and priority of new teacher support within the broader context of tightening state budgets vary between states. Although some research suggests a return of \$1.66 for every dollar

spent on high-quality induction after 5 years of teaching (NTC, 2013), comprehensive induction programs can cost thousands of dollars per beginning teacher. In economic turmoil, some states' priorities do not reflect new teacher needs. NTC (2013) recommended a joint effort of state and federal monies to fund the full cost of induction programs, especially for urban school districts that have a greater need for beginning teacher support services. Due to the state's autonomy in induction programming, a range of variability of program elements make it difficult to measure the true impact of induction (Fideler & Haselkorn, 1999).

Induction cannot be an afterthought. Purposeful, research-driven structure of program design is crucial to dedicate resources wisely and to maximize benefits for novice teachers. Beginning teachers frequently refer to a misalignment of intended outcomes and actual support (Fideler & Haselkorn, 1999; Public Education Network, 2003). Vision or mission statements must be realized by the supports offered in programs. To ensure alignment of intent and support, rigorous and outcome-based measures of changes in teachers' instructional practice, job satisfaction, and impact on student achievement are necessary (Ingersoll & Kralik, 2004; Lopez, Lash, Schaffner, Shields, & Wagner, 2004; Wong et al., 2005). Unfortunately, researchers report that wide-scale review of induction programs in the United States reflect few teacher induction programs that include such an evaluation element (Ingersoll & Kralik, 2004; Lopez et al., 2004; Wong et al., 2005).

State-level jurisdiction of induction programs enables states to convey a message to beginning teachers. Thoughtful, comprehensive statutes establish the importance of profound and rigorous clinical experience as a vital phase in teacher preparation (AFT, 2001). Districts, schools, and new teachers perceive the state's sense of priority for

nurturing the newest members of the field based upon the importance placed on designing and evaluating induction programs consistently across the state. Teacher quality is at the center of education reform. A state's commitment or indifference to improving teacher quality is evident in policy and statutes.

North Carolina Induction Policy

North Carolina's Professional Teaching Standards paint a powerful vision for educators in the state. Achieving this vision is challenging for all educators, especially for new teachers (NCSBOE Policy Manual, 2016). North Carolina requires successful completion of an induction program before a beginning teacher may earn a continuing license in their fourth year. All first through third year new teachers are expected to participate in the BTSP (NCSBOE Policy Manual, 2016; Reeder, 2013). Fourth-year teachers are still considered novice; however, they do not participate in further support services. North Carolina induction policy extends to 115 districts, but each school district has the power to determine how their BTSP operates within the state's minimum requirements (NCSBOE Policy Manual, 2016; "North Carolina Fast Facts," 2011).

North Carolina requires three support components: (a) formal orientation, (b) mentor support program, and (c) evaluation process (NCSBOE Policy Manual, 2010). The orientation for beginning teachers is conducted before the school year begins. Themes addressed during orientation include school and district goals, policies, procedures, the North Carolina Teacher Evaluation Process, curriculum, seclusion and restraint training, and the state's mission and goals (NCSBOE Policy Manual, 2016). Novice teachers with 1-3 years of experience participate in a mentor program. According to the state's policy, administrators are required to observe all new teachers in the classroom at least three times per year. An additional peer teacher observation must be

conducted at least once a year (NCSBOE Policy Manual, 2016).

The North Carolina Board of Education established a general timeline of minimum requirements for all teacher induction programs. Individual LEAs have authority to tailor their induction program to stakeholder wishes as long as it includes the following minimum requirements.

Table 2

BTSP Timetable

Year	The beginning teacher:
Year 1	<ul style="list-style-type: none"> • is assigned a mentor • is provided an orientation • completes any professional development required/prescribed by the LEA • is observed at least four times culminating with a summative evaluation
Year 2	<ul style="list-style-type: none"> • continues to have a mentor teacher • updates the Professional Development Plan • completes any professional development required/prescribed by the LEA • is observed at least four times culminating with a summative evaluation
Year 3	<ul style="list-style-type: none"> • continues to have a mentor teacher • updates Professional Development Plan • completes any professional development required/prescribed by the LEA • is observed at least four times culminating with a summative evaluation

(NCSBOE Policy Manual, 2016).

Each LEA must develop an annual plan and provide a comprehensive program for beginning teachers (NCSBOE Policy Manual, 2016). This plan must meet the BTSP Standards. Plans must demonstrate that the BTSP is proficient on each of the five detailed standards and elements. By October 1, every public, charter, and private school

with an approved BTSP plan must submit an annual report on its BTSP to the Department of Public Instruction that includes evidence of demonstrated proficiency on the BTSP Standards and of mentor success in meeting Mentor Standards (NCSBOE Policy Manual, 2016). Every 5 years, the Department of Public Instruction formally reviews BTSPs to review evidence and verify that program proficiency is demonstrated on all BTSP Standards. The monitoring team should report any standards and key elements where programs are not deemed at least proficient to the Department of Public Instruction. Programs that are rated developing on the standards continuum should be put on an improvement plan and reviewed more frequently to ensure that all beginning teachers are supported.

State standards. North Carolina's vision for education may only be achieved by beginning teachers if a quality induction program supports their professional growth in all 115 districts. To this end, the State Board of Education implemented five guiding standards for all BTSPs. Standard 1 specifically addresses the institutional plan, institutional commitment and support, as well as principal engagement. Each LEA must develop an annual plan and provide a comprehensive program for beginning teachers that meets all BTSP Standards. Standard 2 guides mentors through a formal orientation to the induction program and foundational training in mentoring before they work with beginning teachers. Following formal training, mentors will participate in sustained professional development and in facilitated professional learning communities to refine mentoring skills, advance induction practices, and improve student learning. The focus of Standard 3 is to provide mentors with protected time to spend with their mentee and develop positive, inclusive, and respectful environments that support learning for a diverse student population. Standard 4 addresses professional development that is

tailored to meet the needs of beginning teachers and scheduled before the start of school or soon thereafter. Finally, Standard 5 focuses on district mentor program leaders and stakeholders' joint effort to design a reliable infrastructure to support the collection, analysis, and use of standards-based data to promote continuous high-quality program improvement (NCSBOE Policy Manual, 2016).

A BTSP Monitoring Instrument assists the monitoring team through a continuum of developing proficient, accomplished, and distinguished program criteria. The evaluation team is expected to report any standards and key elements deemed less than proficient to the Department of Public Instruction. State policy dictates that programs that are rated developing on the standards continuum should be put on an improvement plan and reviewed more frequently to ensure that all beginning teachers are supported (NCSBOE Policy Manual, 2016).

North Carolina mentor policy. Mentoring is a researched-based, best practice when complimented by additional support elements. Mentoring assumes such a predominant role in North Carolina's BTSP policy which the State Board of Education crafted five standards for its mentor program (NCSBOE Policy Manual, 2016). The Board of Education developed the North Carolina Mentoring Continuum (2013) to develop a deeper understanding of behaviors, assumptions, and distinctions for mentors in each phase (developing, proficient, accomplished, and distinguished).

The State Board members approved several criteria in selecting a mentor. The mentor should be committed to the profession and have a record of successful teaching (Reeder, 2013). Mentors are to be selected based on an ability to listen, engage in reflective dialogue, and collaborate (NCSBOE Policy Manual, 2016). North Carolina has established the following standards for its mentor program: (a) mentors support

beginning teachers to demonstrate leadership; (b) mentors support beginning teachers to establish a respectful environment for a diverse population of students; (c) mentors support beginning teachers to know the content they teach; (d) mentors support beginning teachers to facilitate learning for their students; and (e) mentors support beginning teachers to reflect on their practice. Mentors are required to participate in a mentor training prior to becoming mentors of beginning teachers (NCSBOE Policy Manual, 2016; Reeder, 2013).

Mentors are expected to serve as role models for new teachers; promote professional growth; assist in lesson planning, classroom management, and time management; and conduct informal observations (Reeder, 2013). Mentors are expected to meet regularly with mentees to challenge and facilitate their growth. Incentives for mentors are one CEU credit per school year, a rating of accomplished or distinguished on Standard 1 of the North Carolina Teacher Evaluation tool, and compensatory time.

District Induction Program Framework

The district's induction program framework rests on six pillars of support. First, a 3-day orientation offers new teachers a comprehensive introduction to instruction, content support, policies, and management of the first year in the district. During orientation, teachers within the same content area are assigned a coach who serves as the second pillar of support within the program framework. Coaches support teacher development during the first year by meeting a mandatory four times to explore specific need-based topics and ask questions related to critical areas of development. Coaches are expected to make themselves available to new teachers through phone calls or emails as challenges arise for beginning teachers.

The third pillar of support of the district's program is an assigned mentor.

Mentors are selected and assigned by principals to beginning teachers based upon the teacher's content and grade-level area. All mentors receive online training through North Carolina's Department of Public Instruction and participate in district-level training to equip new teachers with optimal skills, knowledge, and support. Specifically, district mentors are trained in beginning teacher induction policies of North Carolina, needs and characteristics of novice teachers, roles and responsibilities of mentors, communication, reflection, coaching cycle, and the North Carolina teacher evaluation instrument. District policy states that school-based mentors are assigned one first-year teacher. Retired teachers who serve as mentors, referred to as "Dedicated Mentors," may serve up to 15 new teachers. If a teacher is assigned a mentor in a separate building, communication and agreement between the two principals is required.

Mentors are expected to make a minimum of one contact per week via a class visit, conference, telephone, or email. A monthly log of mentor/mentee contact, signed by both parties, is maintained by the mentor for accountability purposes. Mentors for first- and second-year teachers receive a monthly \$50.00 incentive. Incentives are subject to annual budgets and could change. Specific responsibilities include maintaining regular contact; providing support to aid in the teacher's professional growth; and being available to the new teacher for encouragement, problem solving, etc. Mentors are tasked with nurturing and supporting new teacher needs in a people-oriented, enthusiastic, and knowledgeable way. Mentors are expected to be knowledgeable in Adult Learning Theory, reflective practice, interpersonal development, effective teaching practices, the North Carolina Initial Licensure Program, North Carolina curriculum, and teaching pedagogy. Program policy dictates that principals should only select mentors who have problem-solving skills, can assess and respond to the needs of a novice teacher, are well

versed in data collection and reflection, manage time efficiently, possess conflict resolution skills, and are effective collaborators.

The fourth pillar of support offered to new teachers are two half-day professional development sessions referred to as “Instructional Support Sessions.” One session is held in October and the other is held in March. Program managers and specialist provide new teachers support related to content and grade-level areas. Specifically, specialists offer additional support in curriculum, pacing, best practices, and resources for specific areas. New teachers meet with program managers/specialists in focus groups dependent upon content/specialty area.

The fifth pillar of support in the program framework is school-level orientation. Each school principal or principal designee provides support for new teachers to become oriented to the school-level expectations and culture. Principals have a 24-item outline of areas that they are expected to cover with beginning teachers. This list includes job description and duties; job expectations and responsibilities; processes for evaluation of teacher performance; work schedule; expectations for attendance and punctuality; emergency procedures; departmental norms and culture, review of key people, etc.

The final pillar of support offered to beginning teachers is the mandate of afternoon support sessions led by district-level facilitators. During September, November, January, February, and April, sessions are offered to target critical developmental areas. Every new teacher is expected to attend all four required sessions. The session topics are (a) building effective relationships, (b) classroom management support, (c) curriculum planning, and (d) managing diverse classrooms.

Deficits in the Literature

Despite a large volume of published studies related to self-efficacy, there is an

apparent gap in the literature concerning the impact of induction on the development of self-efficacy. Lowrey (2012) advocated for additional exploration of the effectiveness of induction programs on self-efficacy, adding that through its study, school leaders can better assess how to adapt induction support structures to better meet new teacher needs. Henson (2001) recognized the lack of literature and wrote, “If teacher efficacy is the powerful predictive construct it has been thought to be, then research examining the process by which self-efficacy is built is critical to fostering teacher efficacy and, ultimately, changing behavior” (p. 9). Furthermore, educators need to understand how teachers process and internalize vicarious experiences (Henson, 2001).

The literature is saturated with correlational studies of self-efficacy that use self-report and survey methods to collect data. This has sparked substantial interest and optimism in the education community as to the potential of self-efficacy; however, Henson (2001) pointed out that correlational research is unlikely to illuminate the “complex interplay between sources of self-efficacy information and efficacy development” (p. 30). The limited literature about self-efficacy suggests that it can be influenced by well-organized, active interventions (Henson, 2001). Due to the significance of the construct, experimental or long-term designs are needed to push the examination of efficacy to the next level. In a comprehensive review of literature published about the impact of induction, Ingersoll and Strong (2011) noted a significant lack of effort by researchers to critically review empirical studies that examine the effects of induction on teacher burnout, attrition, or effectiveness in increasing student achievement. Of the 500 identified studies examined by the researchers, only 150 were empirical. Only 10% of the 150 empirical studies met the researchers’ definition of high quality (Banks et al., 2015). A general need exists for higher quality research designs in

efforts to evaluate induction programs for new teachers.

Schools all over the world have turned to induction as a response to growing teacher frustrations and attrition. The literature supports induction as a potentially high valued tool in reducing teacher turnover; however, a closer look at how teachers professionally grow may dictate a change in the labeling of “new” and “veteran.” Fisher (2011) advanced that counting the number of years in the classroom may be inadequate. School districts need a better understanding of the psychological continuum through which teachers progress during the first years in the classroom (Fisher, 2011). To date, the literature highlights positive peer collaboration, strong mentor relationships, and applicable professional development as best practice in lowering teacher frustration and risk of burnout (Fisher, 2011). Research into specific stress-reducing tactics for teachers may help boost induction’s effectiveness.

Summary

The literature establishes the significance of the proposed study. Rising numbers of teachers fleeing the profession, coupled with a steadily widening achievement gap, necessitate the presence of highly effective teachers in every classroom. The literature demonstrates that teacher quality leads to higher student success and lower burnout. States turn to induction as a means of equipping new teachers to deal with the challenges they face. Teachers who are confident in their ability and feel adequately prepared to meet the demands of the 21st century classroom typically report higher student scores than the students of low-efficacy teachers. Effective teachers generally find more satisfaction in their job and become career teachers. Highly efficacious teachers demonstrate a stronger commitment to the profession and foster authentic learning in all students.

Induction is characterized in the literature as a final step in teacher preparation to develop high-quality teachers who are committed to student achievement and are driven by a passion and work ethic. This passion is ignited by teacher beliefs in their own capacity to impact student lives. Induction programs' structure, duration, and composition vary between districts within the state. A substantial number of studies demonstrate the potential impact of mentoring on new teacher effectiveness. North Carolina's policy includes a required mentor component; however, autonomy of program structure is granted by the state to the 115 individual districts.

There is ample support from the literature to conclude that induction is necessary to equip new teachers with the skills and support to remain in the profession and increase student achievement. This research study evaluated the levels of self-efficacy across the three domains of instruction, engagement, and management; new teacher perceptions of their experiences while in the induction phase; and the impact of these experiences on the cultivation of efficacy as well as the alignment of program components to established best practices in the literature. In Chapter 3, a detailed explanation of research design; description of participants, procedures, and instrumentation; data analysis and display; and limitations and delimitation of research follow. A thorough evaluation of the district's beginning teacher support contributes to the discourse in the education community about new teacher needs, the effectiveness of existing support, and goals of developing teacher perceptions of high self-efficacy.

Chapter 3: Research Methodology

Restatement of Purpose

The intent of this research was to assess the level of the perceived self-efficacy of fourth-year teachers across the domains of instructional strategies, student engagement, and classroom management following the completion of the county's induction program. The study explored the induction program's structure to evaluate the extent of participant self-efficacy levels and to what degree best practices are utilized with fidelity. As evidenced in a thorough review of the literature, a strong, comprehensive induction program is critical to education reform. Strong induction experiences shape effective teachers who, in turn, affect overall student achievement, a widening achievement gap, and rising teacher attrition rates. North Carolina's established trend in teacher attrition demands attention to the role induction programs play in developing high quality career teachers. Research shows that teachers with high self-efficacy typically invest greater effort in their craft (Bandura, 1997), exhibit persistence and resilience in the face of challenges of the profession (Fisher, 2011; Tschannen-Moran & Hoy, 2001), and positively impact student achievement (Ashton & Webb, 1986; Grant, 2006). Induction programs that yield highly efficacious teachers report a significant reduction in teacher attrition rates, an elevation in job satisfaction among new teachers, and an increase in student achievement (AFT, 2001).

The purpose of this study was to assess how effective the district's program develops highly efficacious teachers across the domains of instructional practices, student engagement, and classroom management. Quantitative efficacy data, collected from teachers about their level of self-efficacy, served as one source of data. The researcher also utilized a focus group meeting with fourth-year teachers to explore teacher perceptions

about the impact of program experiences on their development in the three measured constructs. The researcher interviewed the program coordinator and analyzed program documents to evaluate the program's design framework. The researcher considered how much deliberate attention was given to instruction, engagement, and management constructs in the program design. Furthermore, the researcher established the strength of presence of four best practices supported in the literature.

Research Question 1. What is the level of self-efficacy of fourth-year teachers across the domains of instructional strategies, student engagement, and classroom management after participation in the district's induction program?

Research Question 2. What are the perceptions of fourth-year teachers related to the domains of instructional strategies, student engagement, and classroom management after participating in the induction program?

Research Question 3. How does the induction program align with best practices with regards to building self-efficacy in instruction, engagement, and management of a classroom?

Research Design

This research utilized both qualitative and quantitative methods to evaluate the induction program. In the first round of data collection, participants rated their sense of self-efficacy along the TSES for the prescribed constructs: instruction, student engagement, and classroom management (Appendix A). Respondents completed the TSES during the spring semester immediately following completion of the state-defined 3-year induction support period. The mean values of the TSES scores offered a quantitative measure of new teacher perceived levels of confidence and belief in their ability to impact student lives through effective instruction, engagement, and

management (Tschannen-Moran & Hoy, 2001). Statistical analysis explored statistically significant differences in perceived self-efficacy based on teacher race, age, school grade level setting, and school Title 1 status.

Following the TSES data collection, the researcher conducted qualitative research through an interview with the district program coordinator as well as a focus group comprised of seven fourth-year teachers who had completed the TSES 2 weeks earlier. Scripted interview and focus group protocols (Appendices C & D) guided the researcher's focus during data collection. The scripted interview protocol included 11 questions for the program's coordinator that facilitated a narrative description of the six pillars of the district's induction program for subsequent comparison to best practices. At the time of the interview, the administrator provided documents that describe program guidelines. These documents were (a) schedules and descriptions of professional development workshops, (b) established goals and priorities of the program, (c) a description of the program's pillar support framework, (d) the handbook of mentor procedures and guidelines, and (e) agendas for the 3-day summer orientation sessions. The researcher examined and coded all documents for analysis. These documents reflect the thoughtful planning and purposeful intent of the induction program. The intended program elements, results, and goals of the program design were evidenced through analyses of these documents.

A focus group of seven teachers convened after the TSES window closed. The researcher viewed the impact of the induction program through the lens of fourth-year teacher perceptions. Analysis of the meeting's transcription revealed trends and themes concerning the quality of influence the program had on these teachers. Ten broad questions guided the focus group discussion to evaluate teacher opinions concerning the

impact of program elements on the formation of their self-efficacy perceptions. Specifically, teachers were asked how their experiences in the program impacted their abilities and confidence in using a variety of instructional strategies, maintaining student engagement throughout a lesson, and effective management of the classroom environment. Teachers also answered questions about their mentor relationship, program elements they considered most valuable, and if there were any needs that were not adequately addressed by the induction program.

Description of Participants

This study was conducted in a major, urban school district in North Carolina's Piedmont region. In 2013, the county's median household income was \$46,000 and the mean household income was \$66,000. From 2010-2013, the population increased by about 15,000. The 2013 unemployment rate was 10%. The number of persons under the age of 18, likely served or will be served within 5 years by the school system was reported at about 86,000. The county employs 3,459 teachers. In 2012, when this cohort of teachers entered the induction program, there were 207 beginning teachers. The school district serves about 54,000 students. The system is comprised of 43 elementary schools, 14 middle schools, and 15 high schools. Nine alternative schools bring the system-wide total to 81.

The researcher acquired an official list of all beginning teachers enrolled in the district induction program in 2012-2013. The list included teachers' names, dates of orientation, and teachers' assigned school. This list contained 207 names; however, a crosscheck with all current district employees revealed only 78 of these teachers remained in the district. This indicated a 62% loss of teachers since 2012-2013 who received induction services and resources. The remaining 78 teachers received an

electronic invitation (see Appendix E) to participate in the research study via their school email. Fourth-year teachers made up the population of teachers who had most recently completed the state-mandated, 3-year induction period. The sole unifying characteristic of the surveyed population was the fact that all participating teachers were in their fourth year of teaching.

The researcher used a 2016 list of employees provided by the district's research department to verify the 2012-2013 cohort teachers' present school, role, and school type (elementary, middle, high, and Title I status). Teacher gender was revealed through district web directory searches, but the induction program's records did not include teacher race. This prevented an evaluation of the cohort's race/ethnicity representation. Therefore, the researcher was unable to determine what percentage of the study participants represented each race compared to the original cohort's demographics.

Based on the 2012-2013 induction roster, the researcher determined the percent representation for gender, school grade level setting (elementary, middle, or high school), and Title I school status subgroups. Seventeen male teachers (22%) and 61 (78%) female teachers made up the total population of teachers who remained in the district in 2016. Of these 78 teachers, 35 (45%) taught in elementary schools, 24 (31%) taught in middle schools, and 19 (24%) were dedicated to high schools around the district. Forty-three fourth-year teachers (42%) worked in Title I schools and 35 teachers (40%) worked in non-Title I schools.

Response Rate

Mitchell and Carson (1989) explained that the survey response rate should be calculated as the number of returned questionnaires or surveys divided by the total sample who were sent the survey initially. Thirty-two TSES surveys were submitted.

Based on the total population of 78 fourth-year teachers, the response rate for this study was 41%.

After conducting a meta-analysis of web- or Internet-based surveys, Cook, Heath, and Thompson (2000) urged careful consideration of representativeness in a sample. Representativeness refers to how well the sample drawn for the research compares with the population under study. The researcher should consider whether the reader is able to evaluate results with confidence that the sample of respondents reflects elements of the population with breadth and depth (Fincham, 2008). The table below reports the percentage of each subgroup (gender, school type, Title I school status) that responded to the TSES instrument compared to the total population of fourth-year teachers.

Table 3

Response Rate for TSES

	Sample	Population	Percent of population represented in the sample
Male	4	17	24%
Female	28	61	46%
Elementary Teachers	18	35	51%
Middle School Teachers	9	24	38%
High School Teachers	5	19	26%
Title I Teachers	18	43	42%
Non-Title I Teachers	14	35	40%

Lack of response to the questionnaire or survey by potential respondents in a sample is referred to as nonresponse bias. In this study, the 41% response rate indicates a

59% nonresponse bias. Steps were taken by the researcher to increase the response rate and lower the nonresponse bias. Five days after the TSES instrument window opened, the researcher sent a follow-up email to participants to encourage participation. This email prompted eight more responses, totaling 10. Two days later, the researcher contacted 52 principals in the district who have fourth-year teachers on staff to request their encouragement for teacher participation. Principals acknowledged the researcher's emailed request for assistance and 27 more teachers responded to the TSES instrument by the closing of the survey. The survey window closed after 10 school days. Five teachers' responses made them ineligible to participate in the study and were exited from the online TSES instrument. The eligible 32 entries established a 41% response rate. Acceptable response rates vary depending upon survey method. An average response rate for an online survey is 30% (Hamilton, 2003). The overall response rate for this study meets this average and each subgroup is represented at the average rate, excluding males (24%) and high school teachers (26%).

Seven teachers who submitted responses to the TSES also volunteered to participate in the focus group. Teacher 1 was a 38-year-old Caucasian female who worked in a Title I elementary school. Teaching is Teacher 1's second career, after working as an administrative assistant. She taught fifth grade and entered the profession through a traditional teacher licensure program through a local university. Teacher 2 was a 24-year-old Caucasian female who taught English as a Second Language (ESL) in a Title I elementary school. She entered teaching directly from an undergraduate licensure program at a local university. Teacher 3 was a 25-year-old Caucasian female who taught kindergarten in an elementary, Title I school. Teacher 3 began teaching immediately following graduation from a traditional teacher preparation and licensure program.

Teacher 4 was a 24-year-old African-American female who taught sixth and seventh grades in a Title I middle school. Teacher 4 entered the profession through a traditional university licensure program. Teacher 5 was a 28-year-old Hispanic ESL teacher at a Title I elementary school. Teacher 5 entered the education profession through lateral entry. Teacher 6 was a 25-year-old Caucasian female who taught first grade in a Title I elementary school. She became a lead teacher through a local university licensure program after spending 2 years as a teaching assistant in the school in which she currently teaches. Teacher 7 was a 42-year-old African-American female who began teaching in 2012-2013 as a lateral entry teacher whose previous career was insurance sales before her decision to teach. Teacher 7 taught at a Title I elementary school.

The focus group was comprised of volunteers, so the sampling was limited to only females who teach in Title I schools. One participant was a middle grades teacher and the remaining six teach in elementary schools. Two teachers entered the profession as a second career through the lateral entry program. Four Caucasian, two African-American, and one Hispanic teacher volunteered to participate in the focus group. Most members of the focus group were in the youngest two age categories: 20-26 years old and 27-33 years old. Two participants fell into the third and fourth age brackets: 38 years old and 42 years old. The researcher preferred the inclusion of non-Title I school teachers, high school teachers, and males to gain a more comprehensive understanding of the effect the induction program has had on its teachers. The researcher had no control of demographics. The focus group represented several subpopulations: Title I schools; middle grades setting; elementary grades setting; four age groups and three races as listed in the TSES demographic questions; and two methods of licensure (traditional and lateral entry) were represented in the focus group.

The researcher took measures to broaden the demographic diversity of the focus group. In case teachers exited the TSES quickly and possibly did not see the focus group hyperlink at the bottom of the screen, the researcher emailed an invitation to join the focus group to all 78 fourth-year teachers 2 days after the TSES window closed. The focus group link appeared in the email body and the subject heading was titled, “In case you missed it!” The focus group meeting was scheduled for the following week at a public library.

Description of Procedures

The researcher submitted a formal application that described the study to the Institutional Review Board (IRB) at Gardner-Webb University. This organization is tasked with reviewing all research that involves human subjects to make certain all federal, state, and local guidelines are honored. There was minimal risk to human subjects as data were collected through teacher survey, administrator interview, focus group, and qualitative document analysis. All participant quantitative responses were submitted anonymously. The researcher transcribed the interview and focus group commentary using pseudonyms to protect participant identity. Following IRB approval, the researcher submitted a formal application to the school district under study. Permission to conduct research was granted in early March 2016.

Mid-March 2016, the researcher sent a mass email (Appendix E) to all fourth-year teachers who participated in the induction program during the 2012-2013 school year as first-year teachers. The email explained the nature of the study and included an attached letter of informed consent (see Appendix F). After reading the explanation of the research, participants clicked on the Google form hyperlink located at the bottom of the email. The Google form (see Appendix G) collected the electronic signatures of consent in an Excel spreadsheet and notified the researcher of participant consent via email.

Immediately following the submission of signatures of consent, the confirmation message included the hyperlink for the quantitative data collection tool. Teachers answered seven demographic questions for subsequent statistical analysis followed by 24 self-efficacy related questions (Appendix A). The TSES was presented to teachers in the format of a Google form and all responses remained anonymous. Teachers reported that the survey required approximately 10 minutes to complete.

After submitting their response to item number 24 on the TSES, teachers clicked “submit” on the exit screen. Immediately following a confirmation message that responses were submitted, teachers viewed an invitation to participate in a focus group session. Participants who were willing to take part in the focus group clicked a new Google form hyperlink to provide contact information to the researcher. The unique link for contact information ensured that all TSES instrument responses remained independent of respondents’ identifying information, thereby ensuring anonymity.

Participant personal information was used to notify them of the date, time, and location of the focus group in April. Focus group members met to discuss their perceptions of the induction experiences that may or may not have impacted the development of self-efficacy in the domains of instruction, student engagement, and classroom management. The researcher followed the focus group protocol (Appendix D) to qualitatively explore teacher ideas about induction element influences on their self-efficacy and in meeting beginning teacher needs in instruction, student engagement, and classroom management.

The focus group discussion evolved from the scripted protocol. As participants arrived, each signed the attendance record and informed consent form (see Appendix H). The researcher read an opening script that reminded participants of the nature of the study. Ten questions explored the teacher perceptions about their experiences in the

induction program and to what degree these induction experiences impacted their development in instructional strategies, student engagement, and classroom management. Group members readily identified program elements that they felt were helpful, needed but lacking, or nonexistent. The researcher used participant responses to gain insight into the experiences that may have shaped self-efficacy perceptions within the measured domains.

The discussion lasted approximately 45 minutes. All teachers were identified as “Teacher 1, Teacher 2, . . . Teacher 7” to maintain anonymity. No individual participant was identified in the transcription or analysis of this discussion. The researcher digitally recorded the audio of the conversation to guarantee the accuracy of the transcription. After transcription, the digital audio recording was deleted. Transcripts of participant responses were emailed to the seven teachers to ensure accuracy. No participant challenged the accuracy of the transcripts. After the meeting, the researcher thanked the participants for devoting their time to give insight on the impact of induction program experiences.

The researcher interviewed the district program coordinator for 60 minutes to ascertain details of the program’s framework design and evaluation. In preparation for the interview, the researcher crafted an interview protocol (Appendix C). The prepared list of 10 broad questions guided the interviewer but clarifying questions were asked when necessary. The researcher recorded the interview with a digital voice recorder for accurate subsequent transcription. The objectives of the interview included gaining a deeper understanding of the program’s procedural guidelines, content, evaluation process, and planned experiences to develop new teacher instructional skills; the ability to engage students; and management of a diverse classroom.

The final source of data for this study was document analysis. At the time of the interview, the program coordinator gave the researcher public documents and physical evidence of the program. Public documents included a description of the program's support framework and the handbook of mentor procedures and guidelines. Physical evidence included a schedule of professional development workshops and agendas for the 3-day summer orientation session. These documents were analyzed for triangulation with program coordinator input, reported self-efficacy levels, and teacher perceptions discussed in the focus group to develop a more complete evaluation of the program.

Description of Instrumentation

This study employed multiple instruments to gather data: the quantitative TSES instrument, an interview protocol, a focus group protocol, and document analysis of program artifacts. Through the examination of data collected through mixed methods, the researcher corroborated findings across data sets and thus reduced the impact of potential biases that can exist in a single study.

Teacher Self-Efficacy Scale (TSES)

Tschannen-Moran and Hoy (2001) developed the TSES, formerly referred to in the literature as the Ohio State Teacher Efficacy Scale (OSTES). Permission to use the instrument was obtained from Dr. Tschannen-Moran (see Appendix I). The researcher offered an online version of the instrument in the format of a Google Form (Appendix A) to make the instrument conveniently accessible for participants and the data readily available to the researcher. Before completing the survey, participants responded to seven demographic questions that enabled the researcher to cross-tabulate data.

The 24-item TSES instrument examined three domains of efficacy: student engagement, instructional strategies, and classroom management. Teachers rated their

level of confidence in their ability to effectively impact student learning in each situational context provided on the instrument. Teacher responses fell along a nine-point Likert-scale. A score of one indicated teacher feelings that they can do “nothing” impactful within that scenario. The maximum score of nine signified that teachers felt they could have “a great deal” of impact within the scenario. Teacher self-efficacy in student engagement was measured by items 1, 2, 4, 6, 9, 12, 14, and 22. Self-efficacy in using instructional strategies was measured by items 7, 10, 11, 17, 18, 20, 23, and 24. Teacher self-efficacy in managing their classrooms was measured by items 3, 5, 8, 13, 15, 16, 19, and 21.

Validity of TSES. Tschannen-Moran and Hoy (2001) completed psychometric testing on the TSES instrument in three separate studies. In each study, researchers conducted exploratory factor analysis. Factor analysis is performed to summarize data so relationships and patterns can be easily interpreted and understood (Yong & Pearce, 2013). Factor analysis isolated constructs and concepts to discover the simplest method of interpretation of observed data, known as parsimony (Yong & Pearce, 2013). Specifically, data from the three studies were submitted to principal axis factor analysis with varimax rotation. The result of rotating the set was to attain an ideally simple structure which attempts to have each variable load on as few factors as possible yet maximize the number of high loadings of each variable (Rummel, 1970). Varimax rotation minimizes the number of variables that have high loadings on each factor and works to make small loadings even smaller (Yong & Pearce, 2013).

Through the psychometric testing studies, the instrument was streamlined from the original 52 items to 24 items in its final form. Researchers performed a scree test that suggested two or three factors could be extracted. Each possibility was further examined.

“In the two-factor solution, items related to classroom management loaded across both factors almost equally, but the loadings were low. In the three-factor solution, management emerged as a separate factor and the other two factors were more clearly specified” (Tschannen-Moran & Hoy, 2001, p. 797). Due to the importance of classroom management in effective teaching (Brophy & Good, 1986) and of concern to beginning teachers (Veenman, 1984), Tschannen-Moran and Hoy believed that the three-factor solution better represented the tasks of teaching. This three-factor solution appeared both “parsimonious and interpretable” (Tschannen-Moran & Hoy, 2001, p. 797). Researchers labeled these factors, “efficacy of instructional strategies” (seven items), “efficacy of student engagement” (eight items), and “efficacy of classroom management” (three items; Tschannen-Moran & Hoy, 2001, p. 797).

Factor analysis of the TSES yielded loadings along these named factors, ranging from 0.50 to 0.78 (Tschannen-Moran & Hoy, 2001). Researchers calculated an efficacy subscale score for each factor by calculating the mean of the eight responses to the items loading highest on that factor (Tschannen-Moran & Hoy, 2001). Using data from Study 3, principal-axis factoring of the three teacher-efficacy subscales (instruction, management, and engagement) from the 24-item instrument revealed one strong factor accounting for 75% of the variance (Tschannen-Moran & Hoy, 2001). The presence of a “second-order factor and the moderate positive correlations of the three subscales suggested that the instrument could be considered to measure the underlying construct of efficacy” (Tschannen-Moran & Hoy, 2001, p. 801). An additional principal-axis factor analysis specifying one factor was completed to further examine the appropriateness of calculating a total score for the 24. All items loaded on this factor, with loadings ranging from 0.49 to 0.76 (Tschannen-Moran & Hoy, 2001). Therefore, a total score as well as

three subscale scores can be calculated.

The results of psychometric testing indicate that the TSES is reasonably valid and reliable in examining teacher efficacy (Tschannen-Moran & Hoy, 2001). The TSES offers a broader picture of efficacy than previous measures. The measures that existed before the TSES did not consider teacher effectiveness with capable students, creativity in teaching, and the flexible application of alternative assessment and teaching strategies (Tschannen-Moran & Hoy, 2001). The TSES addresses some of these previous limitations by including items that assess a broader range of teaching tasks (Tschannen-Moran & Hoy, 2001). “The three dimensions of efficacy for instructional strategies, student engagement, and classroom management represent the richness of teachers’ work lives and the requirements of good teaching” (Tschannen-Moran & Hoy, 2001, p. 801).

Reliability of TSES. Tschannen-Moran and Hoy (2001) measured the internal consistency, or reliability, of the TSES using Cronbach’s alpha. Cronbach’s alpha is a measure of how closely related a set of items are as a group. Values closer to 1 indicate a higher reliability. Values of .80 to .89 indicate good reliability while .90 to .99 is indicative of excellent reliability. The TSES in its finalized, 24-item form yielded reliabilities for the teacher efficacy subscales of 0.91 for instruction, 0.90 for management, and 0.87 for engagement (Tschannen-Moran & Hoy, 2001). The reliability for the 24-item scale was 0.94.

Table 4

Reliability Measures of TSES and Domains

Domain	Mean	Standard Deviation	Alpha
Instruction	7.3	1.1	0.91
Classroom Management	6.7	1.1	0.90
Student Engagement	7.3	1.1	0.87
TSES Instrument 24 questions	7.1	0.94	0.94

Qualitative Protocols

The researcher used two qualitative instruments. To gain an in-depth understanding of program content, framework, and evaluation, the researcher interviewed the program coordinator. The researcher designed an interview protocol to keep the questioning concise and focused. Interview questions elicited explanations and descriptions of the programs' experiences, professional development opportunities, goals, procedures, and perception of the programs' effectiveness. The interview protocol served as instrumentation, providing scripted questions for maintaining focus on the interview objectives.

The researcher collected qualitative data through a focus group discussion with seven fourth-year teachers. The focus group protocol included a script for the researcher and 10 precrafted questions. Prewritten questions and scripted dialogue to begin the discussion enabled the researcher to focus on the study's second research question regarding teacher perceptions of the program's impact upon their sense of self-efficacy. Due to the nature of explanatory sequential mixed methods design, the researcher asked spontaneous, open-ended questions when the researcher wanted the teacher to elaborate. The scripted questions stimulated teacher thoughts about the experiences in the induction program that impacted their growth in instruction, engagement, and management of the

classroom.

Validity of protocols. The validity of the qualitative instruments was established through the steps of the research process. The researcher tried to ensure that collected information was accurate and credible. The interview and focus group protocols were piloted using five third-year teachers to test the clarity of questions. After receiving participant feedback, questions were edited to effectively address research questions.

The researcher utilized triangulation to establish the validity of instrumentation further. The researcher examined emergent themes and trends in data through four filters to further establish validity: TSES quantitative data, program coordinator interview, focus group responses, and document analysis of program artifacts. The convergence of multiple sources of data adds validity to each instrument and the entire study (Creswell, 2014). The research design incorporated “member checking” as an additional source of validity (Creswell, 2014). Participants were afforded a preview of the transcript to review statement accuracy and had an opportunity to clarify their responses further. Participants were instructed to review their transcribed words for accuracy. The researcher explained to all participants that any objection would result in the disputed comment’s removal from the study with no negative consequence.

As discrepant information surfaced amid and among data sets, the researcher noted the instances to discuss in depth in Chapter 5. “By presenting this contradictory evidence, the account becomes more realistic and more valid” (Creswell, 2014, p. 202). Human experiences vary, along with background and perspectives. Discussion of conflicting information adds to the credibility of the collected qualitative data.

Reliability of protocols. Qualitative reliability indicates that the researcher’s approach is stable across multiple projects (Creswell, 2014). The researcher employed

several approaches to maximize the reliability of findings. The researcher read the scripted protocols for the program coordinator interview and focus group discussion. Interview and focus group protocols maintained uniformity of questions to all participants. Procedures established for signing consent and attendance forms maintained the integrity of data collection in both qualitative scenarios. The anonymity of participants was honored in all data collection.

The researcher captured the program coordinator interview and focus group meeting with a digital audio recorder and subsequently transcribed the interview and the discussion verbatim. Participants reviewed their transcribed comments to ensure accuracy. No participant raised an objection. During analysis, the researcher was diligent about maintaining definitions of codes during qualitative analysis. The use of a qualitative analysis web application known as Dedoose minimized the risk of “drift in the definition of codes” (Creswell, 2014, p. 203). The researcher routinely revisited code definitions. Dedoose applies parent and child codes that evolve through the process. The web application sorted and stored all data by codes, enabling the researcher to efficiently pull excerpts for every code and evaluate any inconsistencies or change in the code definitions.

Data Analysis and Display

Research Question 1. What is the level of self-efficacy of fourth-year teachers across the domains of instructional strategies, student engagement, and classroom management after participation in the district’s induction program? This mixed-methods research study collected and analyzed data from multiple sources. The research design is such that qualitative measures (program coordinator interview, focus group discussion, and document analyses) may or may not correlate to the quantitative

data obtained through the TSES instrument. Quantitative data collection involved the TSES instrument. Fourth-year teachers submitted responses to the 24-item instrument by way of a Google form (Appendix A). Google automatically compiled data into an Excel spreadsheet directly from the TSES hyperlink. Using an electronic survey reduced typing error because data were downloaded directly into the SPSS software for analysis.

The research question specifically asked for the level of self-efficacy of fourth-year teachers in the areas of instructional strategies, student engagement, and classroom management after participation in the district's induction program. The TSES was sectioned into three construct domains, each with eight item numbers that addressed the same construct. The mean efficacy responses were calculated for each construct.

The researcher followed the same parameters for the categories of perceived self-efficacy as were set by authors Tschannen-Moran and Hoy (2001) as discrete markers along the Likert scale. The TSES items were phrased in terms of how much influence the teacher feels he or she has in a scenario. Therefore, Tschannen-Moran and Hoy (2001) assigned discrete values to five numeric values: a response of one was assigned the label "nothing" (teacher has no influence); three was deemed "very little" (influence); five indicated "some influence"; seven noted "quite a bit" (of influence); and nine signified "a great deal" (of influence). These categories guided teachers to select the value that reflected the degree of perceived self-efficacy in each item scenario. When evaluating individual responses, the researcher relied upon Tschannen-Moran and Hoy's (2001) defined categories. To conclude a broad level of self-efficacy of fourth-year teachers to answer the research question, the researcher established numeric parameters for the terms low, medial, and high self-efficacy. Mean values 1.0-3.99 were considered "low self-efficacy." The range 4.10-5.99 was designated "medial efficacy," while values between

6.00-9.00 were regarded as “high self-efficacy” by the researcher.

Using SPSS, mode, mean, and standard deviation for all fourth-year teacher TSES responses were calculated. Cross-tabulations and statistical tests were considered for age bracket, race, school grade level setting, and Title 1 school status. Descriptive statistics identified trends in TSES responses to better inform the researcher about the programs’ impact on teacher self-efficacy. To examine the three constructs of efficacy, the researcher calculated the mean of the items that load on each factor. Items 7, 10, 11, 17, 18, 20, 23, and 24 dealt with efficacy in instructional practices. Items 1, 2, 4, 6, 9, 12, 14, and 22 loaded on the efficacy in student engagement factor. Efficacy in classroom management was measured by items 3, 5, 8, 13, 15, 16, 19, and 21.

The quantitative data set revealed the average perceived self-efficacy level in fourth-year teachers as well as an average self-efficacy perception in each measured construct. Next, the researcher ran two statistical tests in SPSS: the Mann-Whitney U test and the Kruskal-Wallis H test. The researcher selected these tests to determine if any statistically significant differences in self-efficacy appeared across the demographic descriptors of gender, school grade levels, Title I status, teacher age bracket, and race. The Mann-Whitney U Test is used by researchers to compare differences between two independent groups. To use this test, data cannot be normally distributed. Normally distributed data are equally likely to plot either above or below the mean. In this study, dependent variables are ordinal and not normally distributed. TSES responses fall along a nine-point Likert scale, satisfying the ordinal, dependent variable criteria of the test. The researcher conducted this test to compare self-efficacy of two independent groups: Caucasian versus minorities and teachers from Title I versus non-Title I schools. The Mann-Whitney U test can only compare two independent variables. Instances involving

more than two categories of data to compare require a different test.

School types by grade levels and age brackets of beginning teachers had three or more groups acting as independent variables. Therefore, the researcher ran a Kruskal-Wallis H Test. School types by grade level had three options: elementary, middle, and high schools. Age brackets were segmented by 6 years into the following increments: (a) 20-26 years old, (b) 27-33 years old, (c) 34-40 years old, (d) 41-47 years old, (e) 48-54 years old, and (f) over 54 years old. The Kruskal-Wallis H Test is considered an extension of the Mann-Whitney U test to allow the comparison of more than two independent groups.

The researcher looked for trends in data. Some of the questions the researcher asked included the following: What level of self-efficacy do participants report in each construct? Do any demographic subgroups report significantly higher or lower efficacy means than other subgroups? Do self-efficacy reports support the program coordinators' description of support services? Does the TSES data reflect teachers' perceptions revealed in the focus group? If no statistically significant differences exist, what are the implications on the induction program? Which questions did most teachers score a higher self-efficacy than others and what might explain this difference?

Research Question 2. What are the perceptions of fourth-year teachers related to the domains of instructional strategies, student engagement, and classroom management after participating in the induction program? The focus group discussion occurred 2 weeks after the TSES window closed. The researcher asked teachers to reflect about how the induction program aided in their skill development within the constructs of instructional strategies, student engagement, and classroom management (Appendix D).

The researcher evaluated teacher responses and applied a numeric label. Using the web-based software Dedoose, the researcher coded every teacher's response to questions about the impact of the program on the development of their skills in instructional strategies, maintaining student engagement, and managing a classroom. The code 0 signified "very little to no" positive impact in the teacher's skillsets in instruction, engaging students, and/or managing a classroom. Key words and phrases "none," "it didn't," or "very little" served as distinguishing markers for the code of a 0. If the teacher indicated that the induction program had "a little" or "some" positive influence, the response was coded as a 1. Responses in which teachers indicated a significant positive impact on their development were designated as 2s. The researcher includes quotes to illustrate specific issues in Chapter 4.

Research Question 3. How does the induction program align with best practices with regards to building self-efficacy in instruction, engagement, and management of a classroom? To answer this research question completely, the researcher addressed two issues: the presence of BTSP best practices and how each best practice addresses the three measured constructs. The researcher employed an analytical method of qualitative research known as document analysis. Document analysis is a systematic procedure for reviewing or evaluating documents. This analytical tool requires that data be examined and interpreted to elicit meaning, gain understanding, and develop empirical knowledge (Corbin & Strauss, 2008). The procedure involved locating, selecting, making meaning, and synthesizing data contained in program documents. This yielded qualitative data in the form of excerpts, quotations, or entire passages that were then organized into major themes, categories, and case examples specifically through content analysis.

The researcher examined the program framework to evaluate the presence of four induction best practices: a multi-day orientation, a knowledgeable and supportive mentor, sustained and rigorous professional development, and regular evaluation of the program. The researcher assigned a parent code for each identified best practice. Next, the researcher assessed the degree of deliberate attention given to instructional strategies, student engagement, and classroom management to evaluate how well the program structure supports each construct. The degree of deliberate attention given to each construct was strictly based on program element descriptions in artifacts and the transcript of the researcher's interview with the program coordinator. The researcher studied the frequency of code application for each of the best practices. Each excerpt with attached code(s) in Dedoose was saved and sorted for efficient recall. The researcher reviewed the excerpts by code to assess the degree of deliberate intent behind each best practice. The researcher assigned a value from 0-2 to denote the degree of deliberate attention given to the measured constructs and best practice.

Limitations and Delimitations

Limitations. The study's methodology does not permit the researcher to connect quantitative results to specific respondents due to anonymity. Therefore, the nature of the study's design impedes "purposeful sampling" for qualitative data collection. The researcher relied on respondent willingness to volunteer participation in a focus group. The focus group participation was limited to female, elementary teachers in Title I schools. This is not a fair representation of the population of fourth-year teachers and therefore is a limitation of the research design.

The scope of the proposed study is a narrow subsection of the teaching population. By focusing solely on fourth-year teachers, potential sample size and the

response rate is limited. Since 2012-2013, only 38% of beginning teachers currently teach in the district. This reflects a 62% attrition rate in the last 4 years. This results in an inevitable smaller sampling of the original population.

Several additional factors may have impacted the response rates to the TSES and focus group participation. The research was conducted in the late spring semester, as teachers may have felt overwhelmed by upcoming end-of-grade and end-of-course exams. As a result, teachers may have opted to avoid the survey or focus group; and participation was limited to 41%. Additionally, given the size and relevance of this district, teachers receive numerous invitations to participate in surveys throughout the school year. An inundation of research requests may have deterred teachers from opening the researcher's emailed invitation and informed consent. The nature of self-report methodology can be viewed as a possible threat to validity. It is an assumption of the study that participants answered accurately and honestly.

This study addressed self-efficacy in a large, urban school district in North Carolina. Results may be generalizable to other districts with similar size and demographics but less applicable to smaller, rural or suburban districts. Induction program designs vary widely across the state and country. Therefore, results may be applicable only to programs with similar support elements and program designs. Teacher efficacy could be influenced by many factors including class size (Glass & Smith, 1979); student characteristics (Brophy & Evertson, 1981; Good & Grouws, 1979); and the school climate in which the teacher works (Ashton & Webb, 1986). The effects of these elements as well as those of the home, community, and culture shape experiences in classrooms, thereby impacting teacher efficacy (Ashton & Webb, 1986). These indirect influences will not be specifically measured in this study and are acknowledged

as a limitation.

A final limitation of the research design is a necessary degree of comfort with technology. Participants accessed the informed consent and the TSES instrument link through school email accounts. To complete the survey, volunteer for focus group participation, and electronically sign the informed consent form, participants needed a familiarity with Google forms and hyperlinks. Therefore, respondent comfort level with technology is a potential limitation.

Delimitations. A delimitation of this study includes the researcher's decision to exclude participants who are outside of their fourth year of teaching. Only teachers in the 2012-2013 first-year cohort were potential participants. Additionally, teachers who received induction support in a different county prior to employment in the district under study and are not considered successful participants in the district's induction program were excluded. The literature provided a wealth of best practices. An effort to narrow the focus of the study to the best-supported practices in induction and mentoring are final delimitations of this study. When coding best practices, the researcher identified four induction practices that are supported by the most credible research.

Summary

The intent of this research was to assess the level of efficacy the district's teachers feel after participation in the required BTSP. The purpose of this study was to assess how efficacious teachers perceive themselves across the domains of instructional practices, student engagement, and classroom management; fourth-year teachers' perceptions of their development of each construct through experiences built into the district's induction program; and the degree to which the program's components align with best practices identified through review of the literature with specific regard to instruction, engagement,

and management.

The researcher evaluated the impact of induction support on fourth-year teachers through multiple data analyses. The first research question focused on a quantifiable self-efficacy perception. Data from the TSES were collected and analyzed to facilitate the researcher's findings in Chapter 4 and implications in Chapter 5. The second research question addressed teacher perceptions of the impact that induction experiences had on their development of instructional strategies, student engagement, and classroom management. The Dedoose web application facilitated electronic coding, sorting, retrieval, and analysis of teacher responses during the focus group discussion. The third research question focused on the program's implementation of induction best practices to build self-efficacy in instruction, engagement, and management. To answer this question, the researcher examined the program's design elements to establish best practices, the degree of purposeful attention given to these practices, and a measure of intent to address the three constructs evident in the program's framework, policies, and guidelines. Chapter 4 displays results, patterns, and trends in data for each research question.

Chapter 4: Results

Restatement of the Problem

Education reform has been a priority on America's agenda for decades, with a widening achievement gap between genders and races. Many researchers point to teacher quality as the single most influential piece of the puzzle (Liston et al., 2008). The education system is transitioning, with the "Baby Boomer" generation reaching retirement age. As new teachers fill these vacancies and additional positions are created to meet the growing population of students and their needs, effective induction programs are critical to the development of high-quality teachers. Teacher attrition rates have alarmed education researchers for decades; but as teacher education program enrollment has plummeted, administrators are in uncharted territory. Enrollment in the University of North Carolina (UNC) schools of education has declined by 30% since 2010 (Bonner, 2016). As the state's biggest source of new teachers, the decline of enrollment in UNC's education programs spells trouble for the education system in North Carolina.

The intent of this research was to assess the level of the perceived self-efficacy of fourth-year teachers across the domains of instructional strategies, student engagement, and classroom management following the completion of the county's induction program. The study explored the induction program's structure in a large, urban North Carolina school district to evaluate participant self-efficacy levels and to what degree best practices are utilized. As evidenced in a thorough review of the literature, a strong, comprehensive induction program is critical to education reform. Strong induction experiences shape effective teachers who, in turn, affect overall student achievement, a widening achievement gap, and rising teacher attrition rates. North Carolina's established trend in teacher attrition demands attention to the role induction programs

play in developing high quality career teachers. Research shows that teachers with high self-efficacy typically invest greater effort into their craft (Bandura, 1997), exhibit persistence and resilience in the face of challenges of the profession (Fisher, 2011; Tschannen-Moran & Hoy, 2001), and positively impact student achievement (Ashton & Webb, 1986; Grant, 2006). Induction programs that yield highly efficacious teachers report a significant reduction in teacher attrition rates, an elevation in job satisfaction among new teachers, and an increase in student achievement (AFT, 2001).

Quantitative efficacy data collected from teachers about their level of self-efficacy served as one source of data. The researcher also utilized a focus group meeting with fourth-year teachers to explore teacher perceptions about the impact of program experiences on their development in the three measured constructs. The researcher interviewed the program coordinator and analyzed program documents to evaluate the program's design framework. The researcher considered how much deliberate attention was given to instruction, engagement, and management constructs in the program design. Furthermore, the researcher established the strength of presence of four key best practices supported in the literature.

Research Question 1. What is the level of self-efficacy of fourth-year teachers across the domains of instructional strategies, student engagement, and classroom management after participation in the district's induction program?

Research Question 2. What are the perceptions of fourth-year teachers related to the domains of instructional strategies, student engagement, and classroom management after participating in the induction program?

Research Question 3. How does the induction program align with best practices with regards to building self-efficacy in instruction, engagement, and management of a

classroom?

Research Question 1

What is the level of self-efficacy of fourth-year teachers across the domains of instructional strategies, student engagement, and classroom management after participation in the district's induction program?

Instructional strategies. See Appendix J for frequency of responses to all 24 TSES items. Figure 4 displays the frequency distribution of the 32 teacher responses to TSES questions that are grounded in the domain of instructional strategies. All TSES items related to instructional strategies received a mean response of 7, indicating that teachers perceived themselves as quite confident in their use of instructional strategies, except for item 17: "How much can you do to adjust your lessons to the proper level for individual students?" Item 17 received the only scale rating of 1 in this instructional domain, indicating no self-efficacy in adjusting lessons to fit individual students. A closer look at item 17's response distribution revealed that 38% of teachers felt they have "none" to "some influence," indicating low to medial self-efficacy. In fact, the researcher noted that when considering the frequency of individual responses along the Likert scale, 28.12% of all responses in the instructional strategies domain fell into the low to medial self-efficacy range, while 71.88% of teachers selected values 7, 8, or 9 (high self-efficacy). "A Great Deal of Influence" (a rating of 9) was selected 17.190% of the time within the instructional strategies domain. Figure 5 illustrates the proportion of low, medial, and high self-efficacy responses in the instructional construct.

The highest mean value corresponded to item 7, which asked participants how well they respond to difficult questions from students. Seven teachers indicated feeling "some" ability to respond to students, by selecting 5 and 6 on the scale (21.88%), but

78.12% of all teachers chose 7, 8, or 9 to reflect a good deal of evidence supporting their level of self-efficacy to respond to difficult questions posed by students.

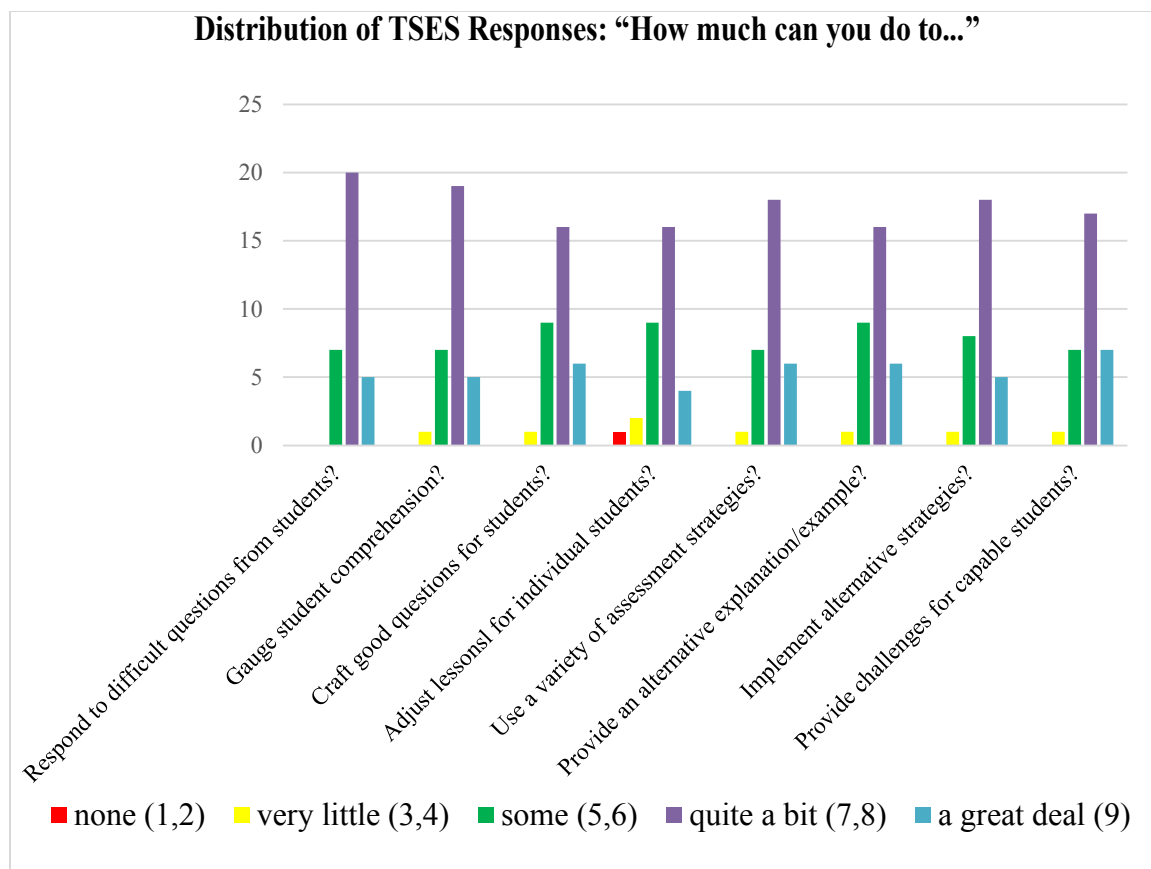


Figure 4. Frequency Distribution for Instructional Strategies Domain.

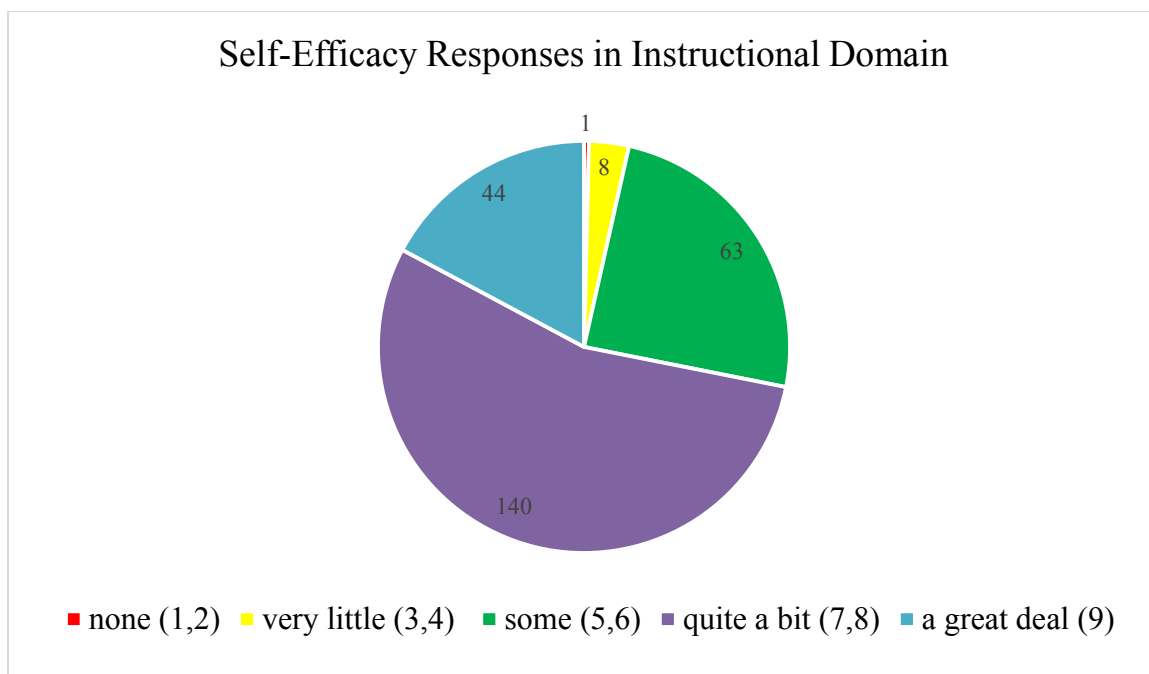


Figure 5. Distribution of Reported Self-Efficacy Levels in Instructional Strategies.

Although descriptive statistics painted a picture of a highly self-efficacious group of teachers in instructional strategies (response mean 7.17), a closer examination revealed 28.12% of teachers self-rated as low to medial efficacy levels in this construct. Furthermore, nearly 40% of teachers felt less than confident in adjusting lesson plans to fit individual student needs. In diverse student populations with a widening range of ability levels and needs, adjustment of lessons to meet student needs is an integral part of teaching.

Student engagement. The second construct measured by the TSES was student engagement. Figure 6 depicts the distribution of participant responses for items related to student engagement. A comparison of the descriptive statistics to the previous construct of instructional strategies exposed a lower mean score across all engagement scenarios. Mean values for instructional strategies were all above 7.0 with the exception of one value (6.81). Within student engagement, all mean values were between 6.06 and 6.91

with a single exception of 7.48 for item 6. The average of mean values for instructional strategies was 7.17, whereas the average mean for student engagement was 6.78. This was not a large discrepancy since both values signify positive perceptions of self-efficacy. Specifically, teachers felt “some” power to influence student engagement but felt capable of making “quite a bit” of influence in scenarios involving instructional strategies. Both values indicated positive feelings of self-efficacy, but the means demonstrated slightly stronger feelings of self-confidence in instruction than student engagement.

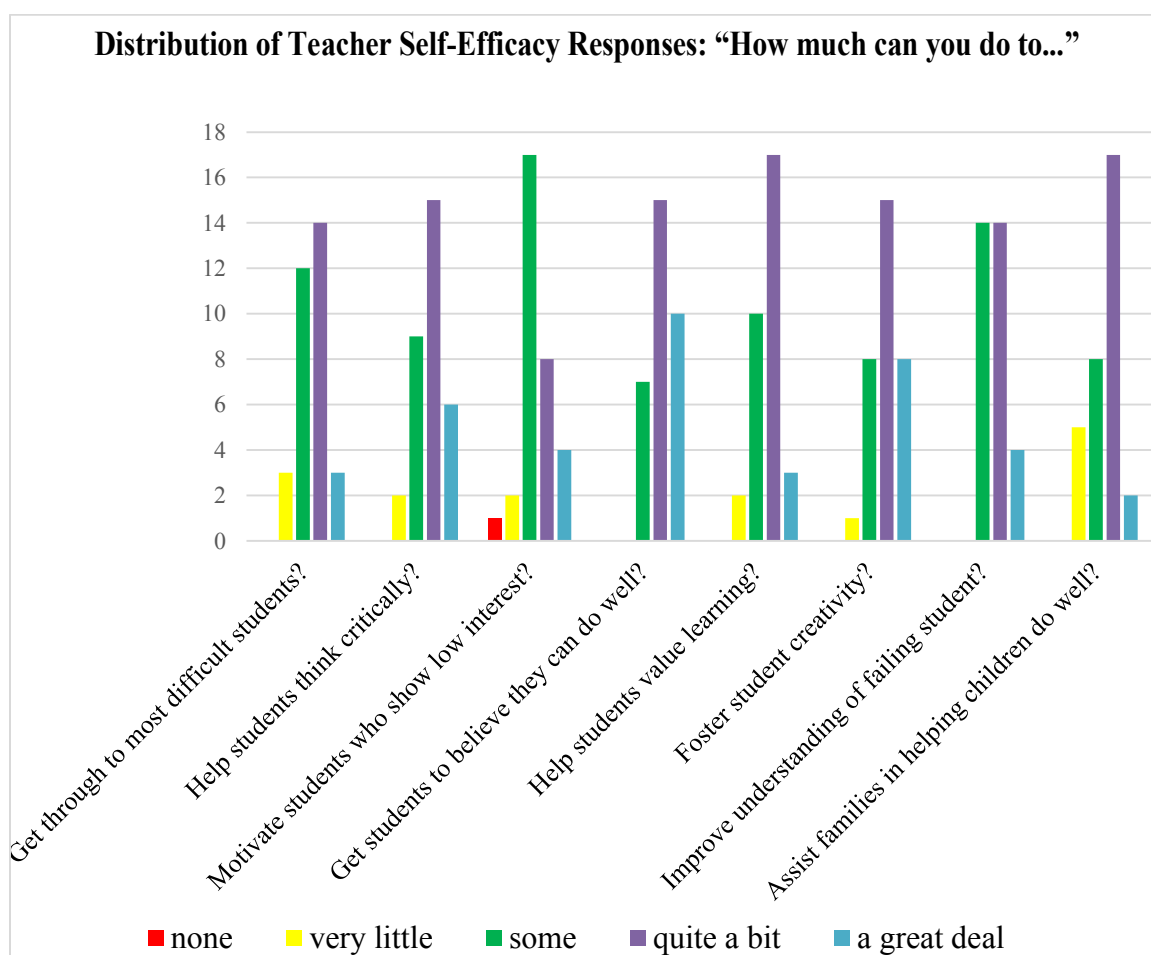


Figure 6. Frequency Distribution for Student Engagement Domain.

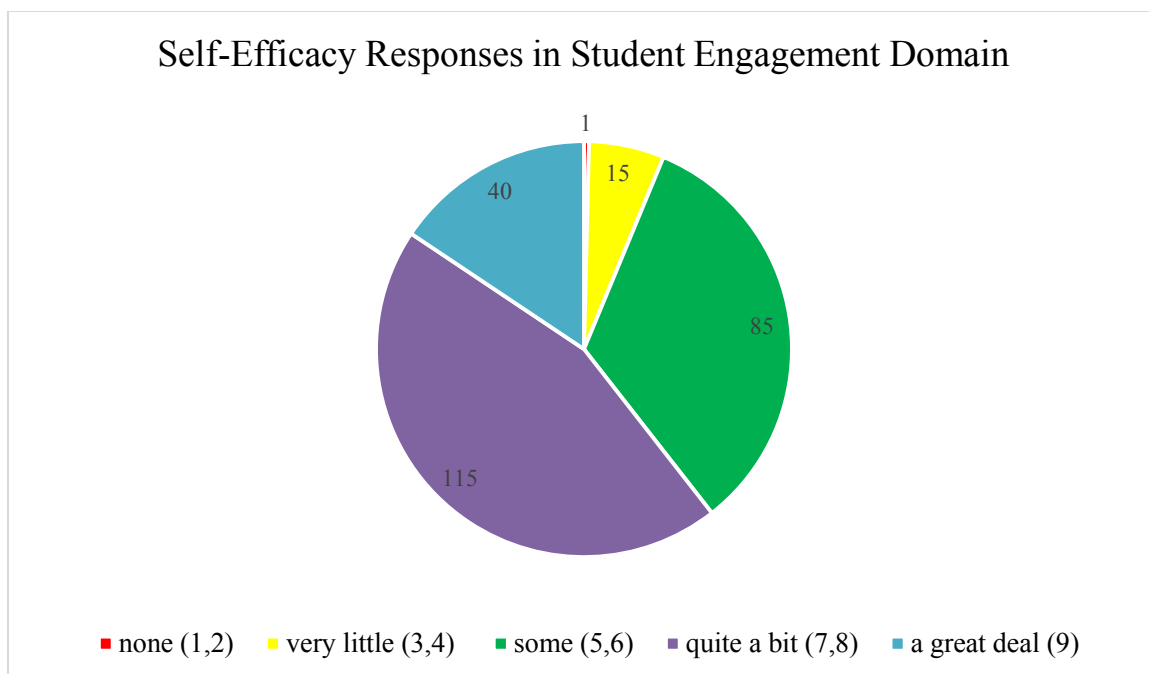


Figure 7. Distribution of Reported Self-Efficacy Levels in Student Engagement.

Item 4 stood out as a particularly low scoring scenario. When teachers considered their ability to motivate students who show low interest in schoolwork, the most often selected score was 5, indicating “some” influence but a noticeable lack of confidence compared to the frequency of 7 and 8 modes of the three analyzed constructs. Teachers felt somewhat capable of motivating disinterested students but to a much lower degree than any other scenario on the entire TSES. Every mode for items 1-24 was higher than item 4’s mode of 5. The 6.06 mean of item 4 was also the lowest mean of the TSES results, revealing 62.50% of respondents felt “none,” “very little,” or “some” ability to positively change student interest in schoolwork.

On the other hand, item 6 exposed a higher confidence level in teacher ability to make students believe they can do well in school. Item 6 prompted teachers to reflect on their level of confidence in their ability to convince students that they can succeed in school. This item was scored as one of the highest mean scores of the TSES.

Respondents selected 7 and 9 equally often, indicating a high degree of confidence in their ability to build student confidence. Only 21.88% of respondents selected 5 or 6 along the Likert scale, while 78.13% demonstrated strong feelings of self-efficacy by selecting 7, 8, or 9. Ten teachers (32%) chose 9 to reflect their highest level of self-efficacy. When considered alongside item 4's data, such contradictory data within the same construct indicated further study is needed to understand why teachers felt they could make students believe they can perform well in school, yet teachers felt unable to motivate disinterested students to invest in school.

Figure 7 displays the relative distribution of low, medial, and high self-efficacy responses to student engagement-related TSES scenarios. Overall, 39.45% of fourth-year teachers reported feeling “none” to “some” ability to engage their students. The majority of teachers (60.55%) reported feeling “quite a bit” to “a great deal” of power to engage students.

Classroom management. The average mean for TSES questions rooted in classroom management was 7.02. This suggests that fourth-year teachers felt capable of managing their classrooms so that learning may occur. Item 5 asked teachers to what extent they make their expectations clear about student behavior. This item had a mean score of 8.16 with the lowest standard deviation (1.14). Zero participants selected scores of 1, 2, 3, or 4 and only a single teacher selected a self-efficacy score of 5. Merely 12.50% (n=4) indicated a feeling of “some” self-efficacy, while 87.50% of responses were 7, 8, or 9s for item 5. In fact, 17 teachers selected a score of 9 to indicate “a great deal” of confidence in making their expectations clear about student behavior. Fourth-year teachers conveyed a strong confidence in their ability to set expectations for student behavior that complimented the overall mean value of 7.02 in classroom management.

Although classroom management received an overall mean of 7.02, several items' means offered a glimpse into the more challenging aspects of management in which teachers felt less confident. Only three items in the entire TSES received mean values less than 6.4 and two of these items focused on classroom management. Item 19 asked teachers how well they could keep a few problem students from ruining an entire lesson. Item 19's mean value of 6.34 was noticeably lower than most items' means, with 56.26% of responses falling into the "none" to "some" influence categories. Item 21 asked teachers how well they could respond to defiant students. Another low mean value (6.26) indicates that most fourth-year teachers did not feel very effective in dealing with defiant student behavior, with 56.25% of teachers selecting "very little" to "some" ability.

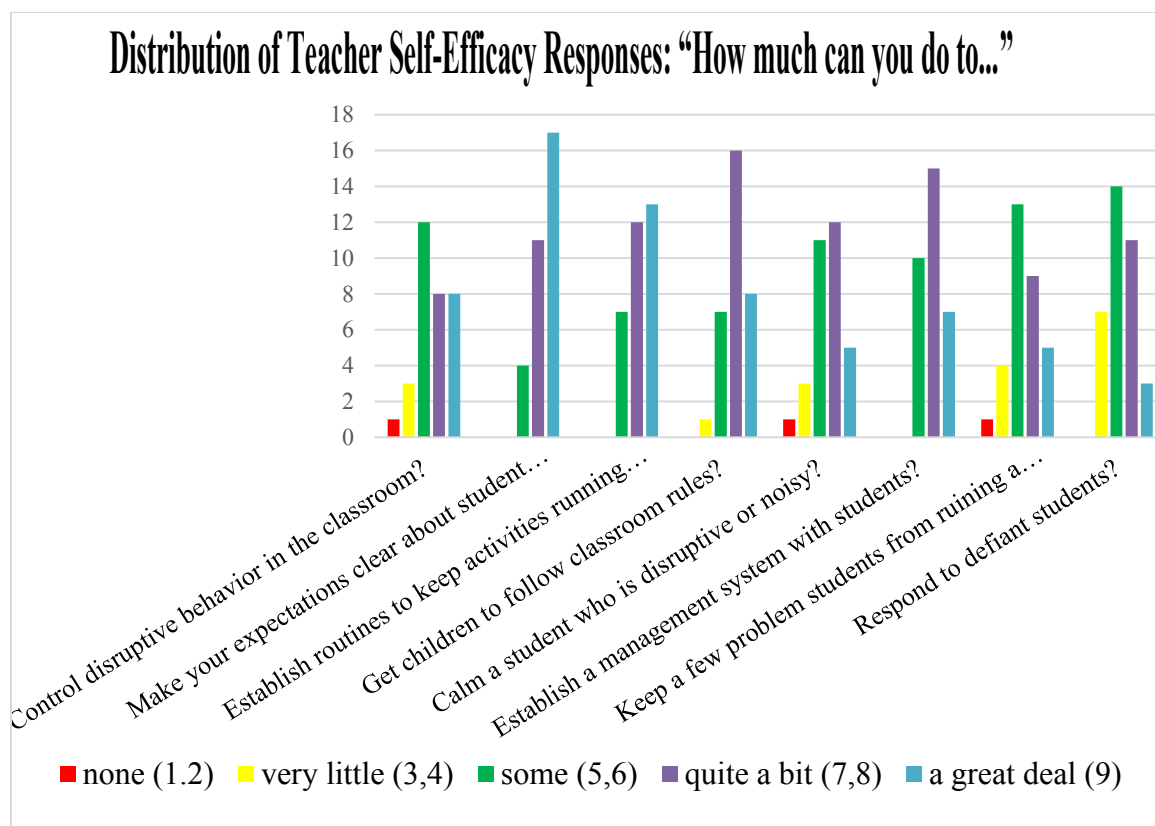


Figure 8. Frequency Distribution for Classroom Management Domain.

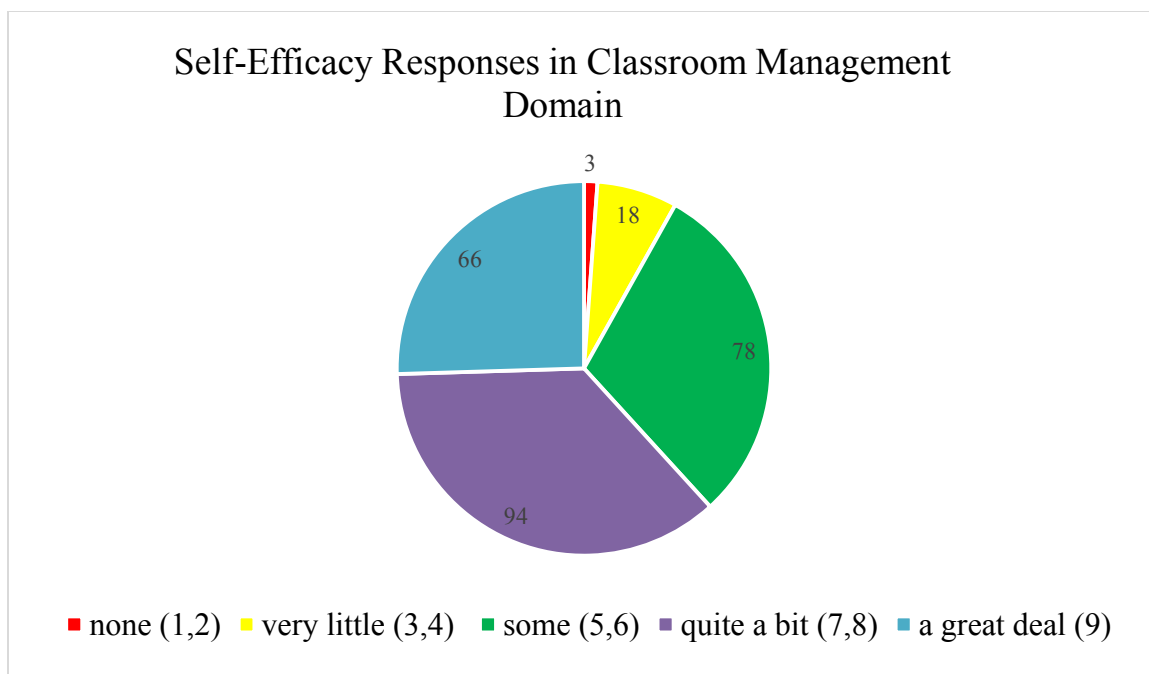


Figure 9. Distribution of Reported Self-Efficacy Levels in Classroom Management.

The researcher noted that phrasing of the scenario might have had an unintended effect upon teachers' response selection. Items 5 and 8 both addressed management issues however phrased the scenario in a way that the teacher had the locus of control. "To what extent can *you* make *your* expectations clear about student behavior?" implied that to the responsibility and control lay within the teacher to make expectations clear. Similarly, item 8, "How well can *you* establish routines to keep activities running smoothly," placed full control within the teachers' hands. These two items received 30 scores of 9. The lowest scored items, numbers 19 and 21, also addressed management but these items were phrased in a way that gave control to students. Item 19 asked, "How well can you keep a few problem students from ruining an entire lesson?" In this scenario, the problem already existed and the "few problem students" already had a degree of control in the classroom. Item 21 asked, "How well can you respond to defiant students?" In each of these latter scenarios, students caused a disruption and teachers

were asked to evaluate their ability to effectively respond to a problem. Referring to teacher-controlled steps to establish expectations and routines might have led teachers to score themselves higher. Scenarios like items 19 and 21 may reflect a truer picture of how fourth-year teachers perceive their classroom management skills. This unintended, potential bias in phrasing is mentioned in this current section specifically due to the disproportionate number of high scores within this classroom management construct, potentially skewing the mean values to reflect an inflated sense of efficacy.

Based on the frequency of responses to these items, 64.45% of answers reflected “quite a bit” to “a great deal” of self-efficacy in classroom management, while 35.55% of answers indicated “no” to “some” belief in teachers’ ability to effectively manage the classroom. No participating teacher selected a score of 1 on any TSES item. A score of 2 was reported a total of five times for the TSES and three fifths of these lowest scores appeared in classroom management scenarios (items 3, 15, and 19), although the teachers’ mean scores suggested higher efficacy in management than student engagement.

Results. Although the classroom management construct had the two highest scoring items, classroom management was the second highest scored construct. With an average mean value of 7.02, teachers appeared to be slightly less self-efficacious in management than in using instructional strategies but perceived the lowest self-efficacy in student engagement.

Table 5

Self-Efficacy Means: Domains and Total Self-Efficacy Reported

Domain	Mean	σ
Instructional Strategies	7.17	1.37
Student Engagement	6.78	1.50
Classroom Management	7.02	1.66
Total Self-Efficacy	6.99	1.52

When examining mean values, it appeared that fourth-year teachers felt most confident in instructional strategies, followed by classroom management. Teachers appeared to be least confident in their ability to engage students. It is important to note that all mean values indicated “quite a bit” of perceived self-efficacy in all three constructs. A closer examination of response frequency (Appendix J) showed that teachers selected 7, 8, or 9 (highly efficacious responses) 64.45% of the time for classroom management items and 60.55% for student engagement items. The instructional strategies construct was a clear strength, scoring 71.88% of item responses as 7, 8, or 9s.

Tests for statistical significance. While analyzing data, the researcher employed two statistical tests to determine if a significant difference existed in responses between subpopulations. The Mann-Whitney U and Kruskal-Wallis H tests examined responses along each construct and compared these responses within each demographic category: Title I status of the teachers’ school, teachers’ race, grade level setting (elementary, middle, or high school), and teachers’ age. The Mann-Whitney U test compared two variables such as Title I or non-Title I status. When analyzing the differences in self-efficacy responses between races, the researcher grouped responses into two race

categories: Caucasian or White and all other minority races. The demographic questionnaire allowed teachers to identify with one of five race labels; however, representation of minorities was too low to statistically validate such comparison. Clustering all minorities into a single non-White/non-Caucasian group facilitated the use of the Mann-Whitney U test with two variables.

Table 6

Mann-Whitney U Test for Significant Difference in Self-Efficacy in Title I/Non-Title I Schools

Null Hypothesis	Significance	Decision
The distribution of Student Engagement is the same across categories of Title I/non-Title I status	0.628	Retain the null hypothesis
The distribution of Instructional Strategies is the same across categories of Title I/non-Title I status	0.911	Retain the null hypothesis
The distribution of Classroom Management is the same across categories of Title I/non-Title I status	0.710	Retain the null hypothesis

Table 7

Mann-Whitney U Test for Significant Difference in Self-Efficacy by Teacher Race

Null Hypothesis	Significance	Decision
The distribution of Student Engagement is the same across categories of race (white/nonwhite).	0.051	Retain the null hypothesis
The distribution of Instructional Strategies is the same across categories of race (white/nonwhite).	0.064	Retain the null hypothesis
The distribution of Classroom Management is the same across categories of race (white/nonwhite).	0.070	Retain the null hypothesis

Table 8

Kruskal-Wallis H Test for Significant Difference in Self-Efficacy by Teacher Age

Null Hypothesis	Significance	Decision
The distribution of Student Engagement is the same across five age categories.	0.272	Retain the null hypothesis
The distribution of Instructional Strategies is the same across five age categories.	0.658	Retain the null hypothesis
The distribution of Classroom Management is the same across five age categories.	0.144	Retain the null hypothesis

Table 9

Kruskal-Wallis H Test for Significant Difference in Self-Efficacy by Grade Level Categories

Null Hypothesis	Significance	Decision
The distribution of Student Engagement is the same across three categories of grade levels (elementary, middle, high schools)	0.374	Retain the null hypothesis
The distribution of Instructional Strategies is the same across three categories of grade levels (elementary, middle, high schools)	0.681	Retain the null hypothesis
The distribution of Classroom Management is the same across three categories of grade levels (elementary, middle, high schools)	0.456	Retain the null hypothesis

The tests' established p value for significance is .05 or less. As seen in the tables above, there was no statistically significant difference in teacher sense of self-efficacy based on Title I status of schools or teacher race. The only noteworthy difference in self-efficacy ratings appeared when teacher race was considered in regards to self-efficacy in

student engagement (.051). This significance level did not meet the .05 or less criteria; however, it was the closest to significance of all comparisons. While representation of Title I/non-Title I school status was almost evenly distributed (18 Title I teachers and 14 non-Title I teachers), it is important to note that the sample size of White/Caucasian was 24 participants and only eight non-White/non-Caucasian participants. To gain better insight into any discernable differences in self-efficacy perceptions, the researcher recommends a future study with more participants so each race category is more equally represented.

The Kruskal-Wallis H test was utilized when three or more variables were analyzed. Teacher age was broken into five categories. Grade-level settings were identified in the tradition sense of elementary (Grades K-5), middle (Grades 6-8) and high schools (Grades 9-12). The distribution of TSES responses indicated no significant difference in responses based on teacher age or grade-level settings. Fourteen teachers in this study were 20-26 years old; nine were 27-33 years old; four were 34-40 years old; three were 41-46 years old; one was between 47-53 years old, and one was 54 or older. Twenty-three teachers were between the ages of 20-33 years, while only nine identified as 34 years or older. Eighteen participants taught at elementary schools, nine teachers in this study taught at middle schools, but only five participants represented high schools. Each grade level setting offered challenges in the three constructs, unique to the grades taught in that setting. The researcher exercised caution when interpreting these results. Although each subcategory was represented, a limited sample may have skewed statistical comparison tests. A true comparison could not be made with such limited responses in multiple subcategories.

Summary of Results

To establish a level of self-efficacy for fourth-year teachers, the researcher established numeric parameters for the terms low, medial, and high self-efficacy. Tschannen-Moran and Hoy (2001) devised the original nine-point Likert scale of the TSES, which offered the researcher simple categorical breaks. Mean values 1.0-3.99 were considered “low self-efficacy” by the researcher. The range 4.10-5.99 was designated “medial efficacy,” while values between 6.00-9.00 were regarded as “high self-efficacy” by the researcher. Based on quantitative data of the TSES instrument, the district’s fourth-year teachers felt highly efficacious about their skills in all three constructs: instructional strategies, student engagement, and classroom management. Mean values were above the 6.00 criteria (high efficacy) in all three constructs, although the previous discussion of outliers should be considered. A total self-efficacy value was calculated using all 24 TSES item responses. This mean was 6.99, reflecting high self-efficacy.

No statistically significant difference in the distribution of efficacy responses existed based on teacher age, race, the schools’ Title I status, or grade-level settings. Race and student engagement presented an interesting significance value of .051; however, it failed to meet criteria for statistical significance. Limited representation of subgroups compelled the researchers to interpret data cautiously and to recommend future research involving a robust and even sampling of all subgroups.

Research Question 2

What are the perceptions of fourth-year teachers related to the domains of instructional strategies, student engagement, and classroom management after participating in the induction program?

The focus group discussion occurred 2 weeks after the TSES window closed. The researcher asked teachers to reflect about how the induction program aided in their skill development within the constructs of instructional strategies, student engagement, and classroom management. The researcher asked how the program might better support future new teachers in these areas as an exploratory line of questioning.

The researcher evaluated teacher responses and applied a numeric label. The label 0 signified “very little or no” positive impact in the teacher’s skillsets in instruction, engaging students, and/or managing a classroom. Keywords and phrases “none,” “it didn’t,” or “very little” served as distinguishing markers for the label of a 0. If the teacher indicated that the induction program had “a little” or “some” positive influence, the response was labeled as 1. Responses in which teachers indicated a significant positive impact on their development were designated as 2s.

Table 10

Teacher Perceptions of Induction Program’s Impact by Construct

Construct	Teacher 1	Teacher 2	Teacher 3	Teacher 4	Teacher 5	Teacher 6	Teacher 7
Instructional Strategies	0	1	1	0	2	0	1
Student Engagement	0	1	1	1	0	0	1
Classroom Management	1	1	2	1	2	0	0

Note. *A “0” represents “very little or no” impact, a “1” indicates “little to some” positive impact, and a “2” represents a significant positive impact.

Instructional strategies. The sole response that described a significantly positive relationship between induction experiences and the teacher’s development of instructional strategies came from an ESL teacher who attributed her growth to the ESL department. The program specialists helped her during half-day instructional support

sessions. Teacher 5 specified the ESL program specialists as the most impactful element of the program by providing valuable resources for instruction. The induction plan mandated two half-day “Instructional Support Sessions” led by ESL specialists.

Therefore, Teacher 5’s response is rated as a significant positive impact of the program.

The focus group included two ESL teachers, both in elementary grade levels. The other ESL teacher (Teacher 2) stated,

I would not necessarily say that the program aided me in the development of instructional strategies that address student needs. I was supported in this area if I had any questions or any concerns about the strategies I was using in our focus groups. I am an ESL teacher and I was placed in the “World Languages” focus group. This group was made up of all levels of instructors: elementary, middle, and high school. While we could collaborate and discuss different language teaching strategies, our variance in the age groups we taught made it difficult to really develop new strategies to address student needs.

It was apparent that when the teacher sought assistance, the ESL department delivered; however, the response was rated as a 1 because she vocalized that the program was “not necessarily” helpful in developing instructional strategies.

While only one teacher indicated a significant impact, three of seven teachers responded that they received “little” to “some” degree of positive impact of the program. Although both teachers worked in the ESL area, Teacher 2 did not benefit as much as Teacher 5. Teacher 2 agreed that the ESL department was responsible for the growth in her instruction skills but explained that the clustering of elementary, middle, and high school ESL teachers into one large World Languages focus group was problematic. Teachers 2 and 3 accredited their impact to the half-day instructional support sessions in

October and March. Teacher 7 based her response of “little” impact on instructional skills to the limited nature of her interaction with her coach. Teacher 7 stated that she only talked to her coach once, at the end of her first year.

It is important to note that the program’s framework specifies that the 3-day orientation address instruction. Through document analysis, the researcher determined that the meaning of “introduction to instruction” during orientation was limited to lesson planning and supporting ESL/exceptional children. Instructional strategies and best practice were not topics covered during orientation. First-year teachers were required to attend half-day “Instructional Support Sessions” in October and March. Teacher 5 gave the only significantly positive response concerning the program’s development of instructional strategies, which she directly attributed to the half-day sessions. Teacher 3 also referenced the half-day “workshops” as beneficial but gave a generally low rating to the program’s impact on her development of instructional skills. The description of these sessions specified that teachers received “support related to the curriculum, pacing, best practices, and resources for specific areas.” Therefore, the time allotted to instructional best practice was shared with three other topics during each 4-hour session.

First-year teachers were also required to attend four afternoon support sessions during September, November, January, February, and April. According to the induction plan, these afternoon sessions “targeted critical development areas.” District-level staff led the afternoon sessions entitled (a) building effective relationships, (b) classroom management support, (c) curriculum planning, and (d) managing diverse classrooms. Only one of four sessions was focused on instructional design but only with respect to lesson planning. Instructional strategies were not covered within the description of the afternoon sessions. Coaching sessions and mentor meetings were the program’s safety

net to provide personalized support to beginning teachers in areas of development. Zero teachers mentioned coaching, mentoring, afternoon support sessions, or orientation as having a positive impact on their instructional skillset. Mentors were specifically tasked with being knowledgeable in effective teaching practices, yet no teacher mentioned a discussion with their mentor about instructional strategies.

Student engagement. The researcher asked the focus group to describe how the induction program experiences impacted their ability to maintain student engagement throughout a lesson. Three of seven teachers stated that their ability to engage students was not impacted by the induction program. Teacher 1 remarked, “Very little was discussed about student engagement. Frankly, I can’t remember anything specific regarding student engagement.” Teacher 5 added, “I don’t think so. We were given a few strategies and some good stuff was said. I think at that time, though, you are inundated by so much stuff that you don’t retain anything.” This response was rated as a 0 due to the admission that this teacher retained very little to nothing regarding student engagement. Teacher 6 boldly stated that she gained absolutely nothing from the program aside from her mentor.

Teacher 4 explained,

I can say that there were a few times that we shared in our meetings, but it wasn’t from the facilitator. It was from the other participants, but we did share some of our best practices. Um, so, it was sort of like a, “This is my problem, what are you guys seeing in your classroom?” Um, so, we kind of helped each other. Not so much the program.

Teacher 4’s response was assigned a label of 1 due to the benefit of peer collaboration, which is embedded in the program framework. It is noteworthy that Teacher 4 specified

that there was no leadership in coaching sessions although she benefitted from fellow beginning teachers' shared techniques.

Teacher 7 first stated that the program did not positively impact her engagement skills. Then she clarified,

I won't say "none," let's not say "none." Sometimes some of the presenters would use different things. I'm like, "Oh, okay. That's cute." You just grab that. It would be great to have a whole lesson on student engagement. Math, science, or just during the day, "How can we turn our literacy program into something engaging?" How can we take theory and make it real life? Make it so something we can always take back to the room. That's just going to work. I didn't gain anything really from the program.

By the end of her response, she settled on "no positive impact." Based on her response, it was clear that Teacher 7 utilized some techniques modeled by presenters. The researcher decided on a score of 0 based on the fact that her response began and ended with the notion of no positive impact. Although she amended her original statement of no impact to mention techniques modeled by presenters, her perception of the program's effectiveness on developing teacher abilities to engage students was very low.

Four teachers indicated "little" to "some" positive impact on their ability to engage students through an entire lesson. Teacher 2, an ESL teacher, said, "I used some of the different language game ideas that other members of my focus group shared in lessons in my own classroom. This allowed me to maintain student engagement on several occasions in using these new games." Teacher 2 found the grouping of all ESL teachers into a single World Language focus group problematic in acquiring instructional strategies. Nevertheless, she applied some ideas from the half-day instructional support

sessions toward engaging her students.

Teachers 2, 3, and 4 shared the same sentiment about coaching sessions. Peer collaboration was conveyed as a strength of the program, but all three teachers attributed the positive impact to peers and specified that it was not the program itself. Although peer collaboration was integrated into the program's framework, these teachers apparently perceived themselves as helping one another in spite of the program, not because of it. Teacher responses suggested a level of disappointment in the program and reliance upon one another. Teacher 7's response echoed this discontent through her wish for "a whole lesson on student engagement."

Student engagement was the lowest rated construct of the three. No teacher claimed a significant influence on their ability to engage students in their class. Three of the four teachers who reported some impact on their engagement skills attributed their growth to peers, not the program's facilitators.

Classroom management. The researcher asked teachers to describe in what ways the induction program assisted them in developing effective classroom management strategies. Teachers generally offered a more positive perception about the role induction played in acquiring classroom management skills. Three of the seven teachers indicated "little" or "some" positive impact.

Teachers 3 and 5 used the word "helpful" when describing the induction services in place to support their ability to manage a diverse classroom. This keyword signified a significant positive influence on teacher development. Teacher 5's response offered only positive statements regarding the program's impact on her management techniques. As a lateral entry educator without the benefit of a teacher preparation program or prior teaching experience, Teacher 5 expressed gratitude for the classroom management focus

of the induction program. Although Teacher 3 described the program as helpful in developing her management ability, the assigned label 2 should be interpreted with caution. Teacher 3 explained that she received a large packet of handouts that she wished she had known for classroom management procedures. Her final statement concerning the impact of program elements related to management was, “We were a given a packet-good stuff on things I wish I’d known like procedures, examples . . . (whispers) I’ve not looked at any of that.” Therefore, although Teacher 3 described the program as “helpful” and its resources as “good” which implied a significant positive impact, the teacher admitted to never utilizing any of the strategies offered through the program. Therefore, the assigned label of 2 should be interpreted conservatively.

The researcher assigned the label 1 to three teacher responses: Teachers 1, 2, and 4. Teacher 1 acknowledged management techniques discussed during induction meetings but stated that it was difficult to acquire new strategies in a room with a wide variety of teachers and types of classrooms. Although Teacher 2 used the term “helpful” when describing the classroom management training in an afternoon session, she then added,

It was also redundant from some of the other trainings and graduate classes I participated in. I do not specifically remember using any of these strategies in my classroom during lessons. This is partly because the training was designed for elementary school regular classroom teachers. As an ESL teacher, my schedule runs differently from that of a regular classroom teacher, so I found it difficult to apply the strategies that were covered.

The researcher assigned a label of 1 to this response because Teacher 2 had difficulty applying strategies discussed during program support sessions. Teacher 4 accredited her coach with sharing best practices during “some conversations,” but

insisted that these conversations were always among peer colleagues in casual discussion. According to this teacher, coaching sessions were not led by the coach but rather by the beginning teachers who shared their problems and asked the group what strategies worked well in their classrooms. Teacher 4 conveyed a sense of regret about the format of coaching sessions. She described coaching sessions as a “free for all discussion--not anything that was planned.” Teacher 4 elaborated to explain that the coach “would step in on some conversations to share some best practice,” but the conversations originated among new teachers’ dialogue with one another. Structured experiences tailored to the group’s struggles in management may have changed teacher perceptions of the program’s capacity to impact new teacher professional growth.

Two teachers indicated that the program had no positive impact on their classroom management skill development. Teacher 6 worked in an elementary classroom as an assistant for 2 years prior to her licensure as a lead teacher. Through her experience, she acquired a working understanding of procedures, systems, and setting behavior expectations to successfully run a classroom. Having prior classroom experience made the program seem rudimentary to Teacher 6. While she hoped to learn innovative strategies to effectively manage an active class, she experienced a repetition of simple principles that she had learned as an assistant. She explained, “It did not tell me stuff that I didn’t already know. I mean, just basic, repeat yourself a lot and, routine, routines, routines at the beginning of the year.” Teacher 7 rated the program’s impact as “none.” She elaborated to say, “By the time I got to the program, I was learning on the fly. I don’t remember anything shared about classroom management because I was just surviving!”

Summary of Results

Teachers reported that classroom management skills were most impacted by the program, followed by instructional strategies. Teachers communicated that their ability to keep students engaged throughout a lesson was least impacted by the program. An analysis of teacher responses presented five prevalent themes: peer collaboration viewed as a strength of the program; a lack of specificity of support in instruction, engagement, and management; a sense of frustration over the lack of structure in the required coaching sessions; teacher sense of being overwhelmed intensified by the dissemination of support through a barrage of printed “handouts”; and an expressed desire for interactive feedback in teacher classroom settings through live or videoed observation. Despite citing peer collaboration as a strength of the program, four teachers expressed the opinion that coaching sessions are a waste of time.

Teachers reported that the program most positively impacted their ability to employ classroom management, followed by instructional strategies to reach learners. Student engagement was described as least supported by the induction program, with three teachers agreeing that student engagement was not addressed at all and four teachers describing “little to some” degree of limited support. Teachers collectively perceived little or no support in instructional strategies, student engagement, and classroom management provided by the program, based on the themes that presented in the analysis.

Research Question 3

How does the induction program align with best practices with regards to building self-efficacy in instruction, engagement, and management of a classroom?

The researcher evaluated the program framework for four key best practices:

- multi-day orientation (Reeder, 2013; Wood & Stanulis, 2009);
- a knowledgeable and supportive mentor (Bullough, 2012; Feiman-Nemser, 2001; Ingersoll, 2004);
- sustained and rigorous professional development (Alliance for Excellent Education, 2004; Ingersoll & Strong, 2011; Wei et al., 2009); and
- regular evaluation of the program (Reeder, 2013; Wood & Stanulis, 2009).

The researcher also assessed the degree of deliberate attention given to instructional strategies, student engagement, and classroom management to evaluate how well the program structure supports each construct.

Table 11

Presence of Best Practice

Best Practice	Evident in Program Framework	Construct(s) Addressed	Degree of deliberate attention given through program design
Multi-day Orientation	Three-day orientation before students arrive	<ul style="list-style-type: none"> • Instructional Strategies • Student Engagement • Classroom Management 	2: clear intent to provide encompassing orientation
Knowledgeable, Supportive Mentor	State and district required mentor training, accountability log, calendar of teacher needs, *district expectations of mentors	<ul style="list-style-type: none"> • Instructional Strategies • Student Engagement • Classroom Management 	2: efforts made to ensure high quality mentor program
Sustained Professional Development	First year: 4 afternoon sessions (6 hours), two half-day sessions (6 hours)	<ul style="list-style-type: none"> • Instructional Strategies • Classroom Management 	1: program does not provide any professional development beyond the first year
Program Evaluation	Teacher retention rate, EVAAS, School Climate Surveys, discipline referrals, principal feedback regarding BT performance and needs, annual Mentor Survey, BT survey in April, annual meeting with neighboring county's induction coordinator to review program	<ul style="list-style-type: none"> • Instructional Strategies • Student Engagement • Classroom Management 	1: efforts and data are present but lack of evidence that data is used to inform program decisions

Note: A 0 indicates no attention given to the construct; 1 indicates limited scope or time dedicated to a construct; 2 indicates a purposeful, encompassing effort to address the construct.

Best Practices Present in Program Design

Orientation. A 3-day orientation takes place for all incoming first-year teachers before students arrive, in the month of August. The district's vision, policies, procedures, and expectations are presented to first-year teachers along with an introduction to key people for instructional support, resources, coaches, and mentors. Brief professional

development opportunities are interwoven in the orientation schedule to address classroom management, lesson planning (instruction), and building relationships (student engagement). The induction program demonstrates a clear, purposeful effort to orient new teachers to the many relevant topics associated with first-year teaching. Therefore, the researcher identified this best practice as evident and deliberate.

Mentor support. The mentor pillar of the program is subjective to mentee needs. Research shows that most of effective teachers' daily tasks and responsibilities align the measured constructs (Tschannen-Moran & Hoy, 2001). Therefore, mentor support should naturally touch on each of the three constructs as needs arise. The state mandates 10 hours of online training for mentors. In addition to this training, prospective mentors must meet with the program coordinator to learn district responsibilities, resources, and expectations. The district provides every mentor with a handbook that includes specific knowledge, skills, and attitudes expected of each mentor. The Calendar of Needs and Concerns of Novice Teachers is included to guide mentors through relevant topics that typically require mentor support. This 12-month calendar covers planning and curriculum pacing as well as classroom management. It does not specifically reference strategies to engage students; however, mentors may have addressed engagement with mentees if the new teacher raised concerns. The handbook outlines three major district expectations: a commitment to fulfill a support role, minimum of one contact per week with the beginning teacher, and maintenance of a monthly mentor log with signatures of the new teacher and mentor. The program's flexible design allows new teachers to receive individualized support, but attention has been dedicated to the development of district guidelines, policies, and mentor training to ensure quality mentor support. Therefore, the researcher identified this best practice as evident and deliberate in the

program design.

Sustained, rigorous professional development. The terms “sustained” and “rigorous” denote an intentional effort to build teacher capacities in critical areas over the span of time that teachers are considered “new” by the state. In North Carolina, that window of time is 3 full years of teaching experience. During orientation, new teachers spend 90 minutes in “Lesson Planning Essentials,” 3 hours in “Effective Lesson Planning” with a content specialist, 90 minutes in “Supporting ESL/EC Students,” 60 minutes in “Deeper Dive into Classroom Management,” and 30 minutes in “Classroom Culture and Building Relationships with Students, Colleagues, Parents.” These professional development opportunities are delivered in a 2-day span. Outside of orientation, the program requires all beginning teachers to participate in 12 hours of structured professional development trainings during the first year of teaching.

A lack of attention to student engagement is a noteworthy observation regarding the rigor of professional development. All professional development geared toward new teachers’ needs ends in April of the teachers’ first year. Teachers in years 2 and 3 retain a mentor; however, structured professional development is not offered beyond the initial year of teaching experience. Professional development is provided to first-year teachers related to authentic challenges experienced by most new teachers in management, planning, and building relationships. The absence of professional development in years 2 and 3 led the researcher to identify this best practice as present but limited in duration of support dedicated to the three constructs.

Program evaluation. The fourth best practice examined in this study was regular, informative program evaluation. According to the program coordinator, several data sources inform decisions about the program. Every April, beginning teachers

complete a district-created survey about their experiences in the program and the relevant needs felt by teachers. During the interview, the program coordinator described how this survey is used to inform the program design:

For example, last year one of the things we kept seeing in the evaluation is that they [new teachers] wanted more training in the content area. So this year we built in more time with content specialists and help with lesson planning.

This summative approach informed the program coordinator about mentor effectiveness and the professional development sessions. The survey responses communicated teacher needs that may have not been supported adequately by the program. These data may have impacted program decisions, but the data reflected the outgoing cohort's perceptions. A formative evaluation conducted earlier in the school year could positively impact current teacher needs as a true reflection of that cohort's specific perceptions and needs. The researcher assigned a value of 1 to this evaluation source due to the retrospective nature of the data; however, the researcher acknowledged that this best practice was present and potentially impacted decisions.

A second evaluative measure is commonly referred to as a "Peer Review." North Carolina requires the district coordinator to meet with a neighboring district's program coordinator annually to evaluate both induction programs using the state's Rubric for Peer Review of the Beginning Teacher Support which is aligned to the state's standards for BTSPs. The state's Department of Public Instruction developed the rubric. The paired district is similar in size, demographics, and SES. The program coordinator (personal communication, April 14, 2016) explained,

I have to sit down with "X" County. There is a rubric we look at to evaluate ourselves. We talk. Not only do we talk with principals, we look at our

evaluations from our new teachers, and we also look back to see what other districts our size are doing.

In addition to the survey and peer review, another major source of information that impacts the program is principal feedback. The coordinator elaborated about a less formal but effective resource. Principals who have concerns about a struggling new teacher sometimes email to communicate this teacher's struggle. The coordinator then arranges for a coach or content area specialist to contact the teacher and offer support. The researcher acknowledges that this is a formative data source that could positively impact teachers in the program; however, this notion of principal input is highly dependent upon principal involvement and motivation. During the interview, the coordinator expressed a desire to train all principals to be sensitive to the unique needs of novice teachers.

The researcher questioned the program coordinator about evaluation measures of each construct. Numerous resources were listed as possible data sources to address instruction including examination of teacher Education Value-Added Assessment System (EVAAS) scores, student achievement scores, teacher retention rates, and principal input from teacher evaluations. Regarding student engagement, the coordinator cited student scores, retention rates, teacher evaluations and the bi-annual school climate survey as data resources used to evaluate the program. A portion of the climate survey is dedicated to mentor effectiveness and available resources.

To evaluate the program's impact on teacher classroom management, the program coordinator (personal communication, April 14, 2016) said,

We can look at discipline referral, in-school, and out-of-school suspension. I've had some principals that have requested additional help with classroom

management and what we've done is we've hooked them up with a behavioral specialist plus we offer these (afternoon) sessions. . . . So if there are problems with classroom management a lot of times I'll hear from principals and they'll say "so and so really needs help with this" or coaches will find out when they're doing coaching sessions. They may email me and say "so and so is really having a difficult time in classroom management. I'm worried about them. Are there any other resources that we might have?"

Based on this response, much depends upon the level of involvement of the 83 principals in the district. A clear explanation of the person or persons responsible for examining and synthesizing all data was not provided.

No peer review, state evaluations, or survey data results were made available to the researcher; therefore, the researcher assigned a value of 1 to the presence of evaluation as a best practice. Although data are collected through multiple sources, *how* the evaluation is used and *who* makes decisions is not apparent. The researcher did not get a sense of a designated person who makes the deliberate time to review teacher's formal evaluations conducted by principals to assess a trend in teacher performance and deficits in skill. Aside from the information gained through the interview with the program coordinator, the researcher did not directly observe any evaluative measures. Many data sources were listed as evaluation sources during the interview, but a comprehensive program evaluation is not present. Therefore, this best practice is described as present but limited in scope.

Program Alignment to Three Constructs

After establishing the presence of four major induction best practices, the researcher evaluated how well the program addressed the three constructs of instruction,

engagement, and management. The researcher evaluated the six pillars of the program, program artifacts such as agendas and professional development descriptions, and the information collected through the program coordinator interview. Each component of the induction program was studied through the lenses of the three constructs to evaluate the degree to which each construct is addressed through the program design.

Table 12

Induction Program Alignment to Instruction, Engagement, and Management

Measured Constructs	Evident in Program Framework	Degree of deliberate attention given through program design
Instructional Strategies	<ul style="list-style-type: none"> • Orientation: Content area support person assigned to beginning teachers to assist with effective lesson planning (3 hours total) <ul style="list-style-type: none"> ○ Orientation: “Lesson Planning Essentials” (1.5 hours) ○ Orientation: “Supporting ESL/EC Students” (1.5 hours) • Two half-day training sessions with content/specialists (total 8 hours) <ul style="list-style-type: none"> ○ “Curriculum Planning” afternoon session (1.5 hours) ○ Mentor calendar of issues to address with mentee: lesson planning/curriculum listed in 3 months 	<p>2</p> <p>Program focus on planning and curriculum; mentor and coach sessions designed to meet any teacher need regarding best practice and resources</p>
Student Engagement	<ul style="list-style-type: none"> • Orientation: “Building relationships with students, colleagues, parents” focus (30 minutes) • “Building Effective Relationships” afternoon session (1.5 hours) • Mentor Calendar of Needs: “Student Motivation” addressed twice (November and December) 	<p>1</p> <p>Support for student engagement is present, but scope is limited to relationship building; no deliberate attention dedicated to strategies; limited time devoted to this construct</p>
Classroom Management	<ul style="list-style-type: none"> • Orientation: “Dive Deeper into Classroom Management” (1 hour) • Orientation requirement for Lateral Entry Teachers (5 discs) • Two required afternoon sessions: “Reflection of Systems and Processes” and “Managing Diverse Classrooms” (3 hours total) • Classroom management/student behavior appears in seven months in the mentor’s calendar of issues to address with mentees. 	<p>2</p> <p>Program provides multiple training sessions in systems, procedures, and processes; additional training for lateral entry teachers; mentor and coach meetings designed to meet any teacher need regarding best practice and resources</p>

Note: A 0 indicates no attention given to the construct. 1 indicates limited scope or time dedicated to a construct. 2 indicates a purposeful, encompassing effort to address the construct.

Instruction. The district’s effort to support new teachers in instruction focuses

on effective lesson planning. Training is designed to ensure that all essential elements of a well-crafted lesson are present to impact instruction. During orientation, 90 minutes is designated to “Lesson Planning Essentials,” 90 minutes address “Supporting ESL/EC Students,” and 3 hours are dedicated to “Effective Lesson Planning” with an instructional support specialist. Additionally, new teachers are assigned a district specialist within their content or specialty area. Specialists and teachers meet for two half-day sessions. During this time, specialists provide support related to curriculum, pacing, best practices, and resources. One of the four required afternoon sessions is dedicated to “Curriculum Planning.” Regarding instruction, the program demonstrates a purposeful, encompassing effort to address this construct through multiple lesson planning sessions with experts in the field. With respect to supporting teachers’ ability to effectively deliver the information to students, the program assigns each beginning teacher a content area specialist to share resources and best practices during the two half-day meetings. Coaching sessions could address the constructs; however, there is no evidence of set agendas or accountability to cover specific topics. These sessions are designed to be fluid so as to respond to assigned teacher needs. There is no evidence of deliberate support in lesson delivery skills such as techniques to build background knowledge and strategies to help students retain vocabulary terms. It is possible, however, that coaches and mentors offer support at a more individualized level.

The program is designed to address critical issues with which all beginning teachers struggle through professional development and orientation. More individualized, less-structured support is offered through a mentor and coaching sessions. The district’s mentor handbook contains a calendar of needs and concerns of novice teachers to guide mentor meetings on the unique needs of their mentees. Strategies for

delivery of lesson material is not listed as a topic to be addressed by mentors, but effective lesson planning is scheduled as a topic of discussion in September, October, and November. Coaches may also address this construct; however, it is not preplanned by program facilitators. Coaches are not held accountable for addressing instruction specifically but are tasked with addressing any needs conveyed by teachers during the four coaching sessions. According to the program coordinator (personal communication, April 14, 2016),

Coaching sessions provide an opportunity to bring any kind of questions or concerns to the group. Coaches are required to have agendas for each of their coaching sessions and those agendas can be based on things that are happening at that time of year. It gives them [coaches] opportunity to share best practices.

If teachers indicate a need for instructional support, the program guidelines dictate that the coach provides the necessary support. The program's focus on instruction is aimed at planning and curriculum pacing. Mentor and coach sessions are designed to meet teachers' individualized needs regarding instructional best practices. Therefore, the researcher determined that the program makes a purposeful effort to address the instructional construct.

Student engagement. The researcher evaluated the topics covered during orientation, two required half-day professional development descriptions and two required afternoon support sessions as well as mentor and coaching guidelines. Support for student engagement is present in the program design, but the scope is limited to relationship building. All seven teachers in the focus group perceived a clear lack of attention given to engagement and expressed disappointment that they were not supported with professional development dedicated to maintaining student engagement

throughout an entire lesson. When compared to the 12 professional development hours dedicated to lesson planning and curriculum, student engagement is noticeably less of a focus, addressed a total of 2 hours through relationship building training. A mini-session entitled, “Classroom culture and building relationships with students, colleagues, and families” takes place on day 2 of orientation for 30 minutes. An afternoon session (90 minutes) also focuses on relationship building. The description of the session details, “This session will provide strategies and support for building effective educational partnerships.” Through strong relationships, teachers build rapport and learn student interests and learning styles. These interests and learning styles impact how well a student will remain cognitively engaged as an active learner. Therefore, these training workshops are relevant to student engagement; however, no structured professional development aimed at strategies to engage students is evident in the program framework.

As previously discussed, coaching and mentor sessions are intended to provide support catered to the group’s needs. If engagement is a struggle for a coach’s assigned group of teachers, the coach should offer resources and best practices as an accomplished educator. “Student motivation” is one of 16 topics listed in December on the mentor’s Calendar of Needs and Concerns of Novice Teachers. This is the only listing related to student engagement. A mentor is expected to provide whatever support is necessary for their mentee, including the development of strategies to maintain student attention throughout a lesson if the mentee struggles in this area; however, if teachers do not communicate this struggle, neither coaches nor mentors may offer strategies to capture and sustain student attention. Without the potential informal input from a coach or mentor, the engagement construct is limited to 2 hours of relationship workshops; therefore, the researcher classified the program’s degree of deliberate attention to student

engagement as limited in scope and time.

Classroom management. The induction program's framework is purposefully designed to provide substantial support in the domain of classroom management. Beginning on day 2 of orientation, novice teachers participate in an hour session entitled "Dive Deeper into Classroom Management" led by the Behavioral Support Team. The Behavioral Support Team may serve as supportive contacts when a new teacher seeks counsel in behavior management. Lateral entry teachers must fulfill an additional training requirement during orientation. North Carolina provides a management training CD to all lateral entry teachers. The training involves five common management scenarios. According to the program coordinator, the state's learning module delivers management strategies to lateral entry teachers and offers the option to print templates for parent contact, conferences, and discipline strategies. The program coordinator added that all teachers are expected to submit a classroom management plan by the end of orientation for her review. No information was obtained about criteria for the plan or if the plans are evaluated. Although the CD training involves only lateral entry teachers, orientation addresses classroom management for all teachers.

The deliberate intent to address classroom management is also evident in the afternoon session topics and the guidelines for mentor conversations. Two of the four required afternoon sessions address classroom management. These two sessions total 3 hours dedicated to "Reflection of Systems and Processes" and "Managing Diverse Classrooms." The mentors' Calendar of Teacher Needs lists classroom management a total of seven times in the calendar year. Classroom management is interspersed throughout the year to address changing needs. Management conversations such as the establishment of rules, behavior plan and consequences, and procedures are listed in each

of the first 3 months of the school year. Management of student behavior reappears on the calendar during the winter holiday season and again at the end of the school year.

The mentor component of the program permits flexibility to meet individual teacher needs as those needs evolve. The researcher identified evidence of deliberate intent to address the management construct by providing multiple professional development opportunities in systems, procedures, and processes; additional training for lateral entry teachers; and mentor and coach meetings designed to meet teachers' needs.

Summary of Results

The researcher established the presence of all four key best practices. The researcher decided that the induction program demonstrated a legitimate effort to orient new teachers to the district's vision, policies, and procedures. The 3-day orientation also provides introductory professional development related to two of the three measured constructs. The program ensures that every new teacher is paired with an experienced, trained mentor. Program artifacts show a deliberate effort to establish mentor guidelines, develop accountability measures, and deliver relevant district training to ensure that every teacher is paired with a knowledgeable, supportive mentor.

Based on descriptions and artifacts of the program framework, the best practices of professional development and program evaluation are present in the program design but in a limited capacity. The researcher noted a lack of rigor in the professional development due to a relative deficit of attention given to the student engagement construct when compared to the other constructs. Teachers receive professional development related to authentic challenges that most first-year teachers encounter in management, planning, and building relationships; however, professional development is restricted to the first year only. Teachers in their second and third years only have the

support of their mentor. Regarding program evaluation, several data sources were listed as evaluative measures during the interview with the induction program coordinator. The summative measure of beginning teachers' survey completed in April; the annual Peer Review with the neighboring county's program director; and potential, informal principal feedback were cited as the major sources for evaluation. When the researcher inquired about the evaluation of each measured construct, the coordinator offered additional sources of data including EVAAS, teacher retention rates, student discipline referrals, and student achievement data. No explanations of who examines the data or how the data impacts program decisions were offered. A comprehensive program evaluation that examines multiple sources of data to develop a more complete and accurate assessment of the program's effectiveness is required to demonstrate a legitimate use of this best practice.

The researcher determined that the program aligns with all three measured constructs, but the attention dedicated to student engagement is most restricted in time and scope. The framework reflects a deliberate effort to address the instruction construct through multiple training sessions dedicated to lesson planning and curriculum pacing. An assigned content area specialist shares resources and best practices during two, half-day training sessions. Coaches and mentors may address instructional best practices in the informal settings, dependent on mentee needs. The researcher determined that the program demonstrates a purposeful effort to develop teacher instructional skills. Similarly, the induction program provides substantial support in the area of classroom management. The researcher noted evidence of deliberate attention given to this construct in the form of formal professional development sessions in systems, procedures, and processes; additional training in classroom management for lateral entry

teachers; and mentor and coaching sessions designed to respond to teacher needs throughout the year. Significantly less time is dedicated to developing teacher abilities to engage students for maximum student learning. The two relationship trainings align to the engagement construct, but the construct is limited to relationships. When compared to the six professional development hours dedicated to the instruction construct, engagement received considerably less attention. A noticeable lack of structured professional development aimed at strategies and best practices to gain and maintain student interest compelled the researcher to describe the construct as addressed but in a limited capacity.

Chapter Summary

Based on quantitative data of the TSES instrument, the district's fourth-year teachers feel highly efficacious about their skills in all three constructs of instruction, engagement, and management. Mean values greater than 6.00 in every construct indicate "quite a bit" of self-efficacy in each construct. A total self-efficacy mean value of 6.99 further supports the conclusions that fourth-year teachers feel highly efficacious. Closer examination of data revealed trends of lower self-efficacy in adjusting lesson plans to fit individual student needs, motivating disinterested students, and keeping problem students from ruining an entire lesson. Several positive trends also emerged such as teacher confidence in their ability to respond to difficult questions from students, make students believe they can do well in school, and make teacher expectations clear about student behavior. There is no statistically significant difference in the distribution of efficacy responses among subgroups based on age, race, grade level setting, or school's Title I status.

The researcher attempted to view the program's effectiveness through the lens of

a teacher by enlisting seven teachers who completed the program for a focus group. Teachers reported that classroom management skills were most impacted by their experiences in the induction program, followed by instructional skills. Teachers also communicated that the ability to engage or motivate students and maintaining their attention throughout an entire lesson was least impacted by induction support. An analysis of teacher dialogue revealed five prevalent themes. Peer collaboration was viewed as an important strength of the program, but teachers noted the lack of specificity of support in instruction delivery and engagement strategies. Most teachers pointed to coaching sessions as a waste of time that could be better spent on more specific, structured professional development. A mass sense of frustration about the lack of structure in the required coach meetings was expressed by most of the focus group participants. Finally, teachers described feeling overwhelmed by a barrage of “handouts” during facilitator-centered professional development. Teachers wanted more interactive feedback from coaches and mentors instead of “sit and get” type meetings. Collectively, teachers said that the program provided “little” or “no” support in developing instructional skills, engaging students, and managing a classroom as a result of the themes that presented in the analysis of the transcript.

The researcher found evidence of the presence of all four, critical best practices to some degree. A 3-day orientation demonstrates an effort to orient new teachers to the district’s vision, policies, and procedures. Program documents show an effort to establish mentor guidelines, develop accountability measures, and deliver relevant district training to ensure that each teacher is paired with a knowledgeable, supportive mentor. The focus of induction professional development is intended to support teachers in classroom management and lesson planning. The researcher acknowledged the lack of rigorous

professional development in student engagement compared to the required training in instruction and management. The program's attention to student engagement is restricted to two mini-courses on building positive relationships. Regarding program evaluation, the survey beginning teachers complete in April; the annual Peer Review with the state's rubric; and potential, informal principal feedback were cited as the major sources for evaluation. An absence of explanation about who examines the data or how the data are used to influence program decisions signified a lack of deliberate attention given to this best practice. A comprehensive program evaluation that examines multiple data sources is necessary to establish this best practice is used with fidelity.

The researcher determined that the program addresses all three measured constructs, but the attention dedicated to student engagement is limited in time and scope. There is evidence of deliberate effort to address the instruction construct through rigorous professional development in lesson planning and curriculum pacing. Content area specialists share resources and best practices during two, 3-hour training sessions. Coaches and mentors may address instructional strategies in the informal settings, dependent on mentee needs. The researcher acknowledged multiple, formal professional development sessions in classroom management systems, procedures, and processes; digital lateral entry teacher training; and mentor and coaching sessions designed to respond to teacher needs as needs present. A noticeable lack of structured professional development aimed at strategies and best practices to gain and maintain student interest compelled the researcher to describe the construct as addressed but in a limited capacity.

Chapter 5: Discussion

Summary

Education in the 21st century is arguably one of the most demanding, personally taxing professions in society (Kaur, 2011; Yu et al., 2014). Newest members to the profession need intentional support by experienced leaders in the field. During a time when first-time teachers face brand new challenges and responsibilities, they need additional training and guidance from leaders in education. Research supports the understanding that high-quality induction programs and mentoring are associated with increased teacher satisfaction and teacher retention (Johnson et al., 2005). Urban districts often lose as many as 50% of teachers in the first 3 years in the classroom (Darling-Hammond, 1997). The urban district at the core of this study lost 62% of new teachers between the years 2012 and 2016. Therefore, an evaluation of teacher self-efficacy levels, teacher perceptions about the impact the induction program had on their professional growth, and the presence of best practices embedded in the program framework was used to evaluate the program's effectiveness.

The researcher chose to focus on the most recent cohort of teachers who completed the district's 3-year induction support program. The study answered the following research questions to inform the practice of induction programs that aim to develop and retain highly qualified teachers.

Research Question 1. What is the level of self-efficacy of fourth-year teachers across the domains of instructional strategies, student engagement, and classroom management after participation in the district's induction program?

Research Question 2. What are the perceptions of fourth-year teachers related to the domains of instructional strategies, student engagement, and classroom management

after participating in the induction program?

Research Question 3. How does the induction program align with best practices with regards to building self-efficacy in instruction, engagement, and management of a classroom?

The district's fourth-year teacher self-efficacy levels were quantitatively assessed using an instrument developed by Tschannen-Moran and Hoy (2001) known as the TSES (Appendix A). Teachers submitted responses to the 24-item TSES and seven demographic questions via a Google form hyperlink. The researcher analyzed teacher responses to evaluate teacher self-efficacy levels within each measured construct. Kruskal-Wallis and Mann-Whitney U tests were utilized by the researcher to determine if any statistically significant difference in self-efficacy exists based on teacher age, school setting (elementary, middle, or high school), school's Title I status, or teacher race.

Teacher total self-efficacy mean was 7 on a 9-point Likert scale, indicating that teachers felt confident in their ability to instruct, engage students, and manage a classroom. Teachers also reported a mean value of 7 in each domain. A closer examination of the frequency of responses along the Likert scale revealed that fourth-year teachers felt most confident in their ability to instruct followed by classroom management. Teachers felt least confident in their ability to engage students in learning (mean value of 6.78). TSES items related to instructional strategies received an average score of 7, indicating a high level of perceived self-efficacy. Teachers reportedly felt confident in their ability to respond to difficult questions from students, assess student learning, craft good questions, meet diverse learners' needs, provide an alternative explanation or example to students, implement alternative strategies, and plan appropriate challenges for academically gifted students; however, the researcher noted a trend in data

distribution within the instructional domain. Nearly 30% of responses related to instructional skill fell in the low to medial self-efficacy range.

An alarming 38% of surveyed teachers reported “no” to only “some” confidence in their ability to adjust instruction to fit individual student needs. High-quality educators assess student needs and abilities to plan differentiated instruction to address individual student needs (Feiman-Nemser, 2001; Futrell, 2008; Johnson & Kardos, 2008; Upokodu, 2007). Twenty-first-century classrooms are filled with students from a wide range of backgrounds and with diverse learning needs and abilities. Demographic trends of the population are changing and becoming more diverse (Smelser et al., 2001). Therefore, effective educators must be able to meet a widening range of student needs to bridge gaps in understanding and skill sets. To do so, teachers must be able to adjust instruction to fit individual student needs. The fact that nearly 40% of surveyed teachers lack confidence in their ability to differentiate instruction after 3 years of induction support suggests that the program insufficiently prepared new teachers to meet diverse instructional needs. Professional development should focus on effective differentiation through lesson design. Mentors and coaches should support the logistical application of management strategies that make differentiation of instruction possible. For example, management of a variety of resources to meet a broad range of student needs and the logistics of executing a small group rotation schedule to provide differentiated instruction requires a mastery level that is not innate to beginning teachers. Support from experts in the field would help develop the skills to effectively teach in a diverse classroom (Ingersoll, 2012). Purposeful professional development in differentiating during the planning process and mentor and coach support in establishing routines that facilitate small group instruction may increase new teacher sense of self-efficacy in meeting diverse student needs.

Student engagement has multiple meanings. Researchers have defined student engagement as (a) the primary theoretical model for understanding and intervening with students at risk for dropping out of high school; (b) the foundation of school reform initiatives that focus on developing student perceptions of competence and control, personal goals, and sense of belonging with peers and teachers (National Research Council and Institute of Medicine, 2004); (c) interrelated with the construct of motivation to learn (Appleton et al., 2006); and (d) applicable to all students (Furlong & Christenson, 2008). This construct crosses all socioeconomic, gender, and ethnic groups; therefore, all teachers deal with the challenges of engaging students and maintaining that engagement throughout a lesson. The eight TSES items related to student engagement received the lowest scores from teachers. After 3 years in the classroom, approximately 40% of surveyed teachers felt less than confident in student engagement, yet researchers agree that this construct is crucial to student success (Shoulders & Krei, 2015). The alarming rate of student disengagement from learning and the strong correlations of failure and dropout rates associated with that disengagement necessitates high-quality induction programs (Klem & Connell, 2004). It is imperative that induction programs equip teachers with the capacity to identify and intervene when student engagement is an issue. This data point indicates that teachers felt less confident in their ability to engage students.

The constructs are interdependent. A greater focus on differentiation would result in more students engaged at their appropriate level (Taylor & Parsons, 2011). Student engagement is a welcomed by-product of effective planning and true differentiation to meet student needs. Students who are met at their level are less likely to disengage due to frustration, which often leads to disruptive behavior and classroom management

challenges (Taylor & Parsons, 2011).

An overwhelming majority of teachers indicated strong feelings of confidence in their ability to convince students that they can succeed in school. These data seemingly contradict the 63% of teachers who indicated a lower confidence in their ability to positively change student interest in schoolwork. The researcher hypothesized that teacher interpretations of TSES items were influenced by the locus of control and personal sense of responsibility. Foss and Waters (2007) supported this hypothesis, adding that self-reporting is an inherent threat to validity due to the subjective nature of the methodology. Most teachers can recall moments of frustration with an obstinate student who refused to do his or her work. The scenario may have conjured visceral feelings of powerlessness when facing a student who refuses to cooperate. This may have led to lower scale scores.

On the other hand, as one of the highest rated items on the TSES, teachers viewed themselves as active agents to empower students to believe they can do well in school. The response may have been influenced by what the researcher calls “a self-preservation factor.” If teachers reported low confidence in their ability to empower students, this report would perhaps negate their effectiveness as a teacher. Therefore, teachers may have rated this item higher based upon the implication of a less confident response on the teacher’s self-image. Further study is recommended to explore why teachers perceived themselves as least confident in motivating disinterested students to invest in schoolwork but have a stronger sense of self-efficacy in making students believe they can succeed in school.

When classrooms are mismanaged, the available time for instruction is significantly reduced, thereby directly impacting student achievement (Brouwers &

Tomic, 2000; O'Neil & Stephenson, 2011). In a classroom lacking management and order, students find it much more difficult to focus, spend their time on task, and retain new information (Brophy, 1998; Dibapile, 2012; Shoulders & Krei, 2015). Well-managed classrooms become places of intellectual freedom and safety to students. Data suggest that surveyed fourth-year teachers were confident in their ability to manage a diverse classroom; however, a closer inspection of the trends in data revealed interesting relationships.

A direct relationship between classroom management and student engagement is undeniable. Klem and Connell (2004) found that highly engaged students perceived their instructors as caring and supportive and their classroom environment as well structured with high expectations. Students activate long-term memory by attending to the teacher's instruction without being disturbed and store new information efficiently for quick retrieval in the future (Dibapile, 2012). Reduced disruption leads to efficient application of new information, in turn impacting student success. As discussed, teachers expressed the least degree of confidence in the student engagement construct, especially in motivating disinterested students; yet teachers reported strong self-efficacy in the management construct, with an overall mean of 7. A closer look at the data trends within the management construct may explain this juxtaposition.

The lowest mean values within the management construct involved scenarios in which the students had control and the teacher had to react to regain control of the learning environment. Teachers reported lowest efficacy levels in the ability to keep a few disruptive students from ruining an entire lesson and to respond to defiant students. Over half of teachers rated themselves as having "none" to only "some" confidence in their ability to deal with unmotivated and/or defiant students. Unfortunately, disengaged

and defiant students are realistic challenges for new teachers (Dibapile, 2012). Establishing and maintaining order and control is one of two major tasks in the classroom; the other task is learning or instruction (Doyle, 1986). Researchers acknowledge that the purpose of effective management is to allow for maximum learning without interruption or distraction. Despite high levels of reported self-efficacy, there are apparent deficits in teacher sense of preparedness following completion of the induction program. Increased application-based support for genuine differentiation by mentors and coaches would engage students on their instructional level (Johnson, 2004). These students are more likely to experience success rather than frustration and alienation. As engagement increases, student avoidance and disruptive behaviors decrease.

The Mann-Whitney U and Kruskal-Wallis H statistical tests found no statistically significant differences in the distribution of efficacy responses based on Title I school status, teacher race, teacher age, or grade-level settings. This fact supports the idea that a strong induction program would benefit all beginning teachers from a variety of backgrounds and experiences. The 62% attrition rate between 2012 and 2016 suggests a district-wide need for better support of new teacher professional growth to increase job satisfaction and reduce teacher turnover. Efforts to strengthen the program would have a positive impact on the entire district, regardless of teacher age, race, Title I school status, or grade-level setting.

In addition to the quantitative TSES data, the researcher facilitated a focus group of seven fourth-year teachers. The researcher explored teacher perceptions of the program's impact on their developing sense of self-efficacy in instruction, student engagement, and classroom management. Seven scripted questions guided the focus group discussion (Appendix D).

A legitimate goal of an effective induction program should be the development of new teachers who feel equipped and confident in their ability to instruct. Highly efficacious teachers tend to use more innovative instructional strategies and believe that all students can learn on higher cognitive taxonomy levels (Anderman et al., 2002; Davies, 2004; Rubie-Davies, 2008). Teachers who learned educational theory during a teacher education program reported a need for support in applying theories and innovative teaching strategies in their classrooms with diverse ability levels and needs. Lateral entry teachers who did not attend a preparation program expressed an urgent need for more support in the practical application of instructional strategies. Teacher-reported weakness in differentiation surfaced once again, as reflected in the TSES data. The program is designed to make resources available and to facilitate effective lesson planning to deliver instruction, but there is a lack of application-orientated support. Several teachers in the focus group suggested requiring mentors or coaches to observe and deliver feedback on a lesson. All program facilitators are full-time employees in another capacity in the district, so in-person observations may be difficult to manage; therefore, time and responsibilities beyond induction support are constraints.

Technology offers options for videoing or streaming a lesson that can be captured, reviewed by the mentor or coach, and discussed with the beginning teacher at a later meeting date. This type of support may change teacher perceptions of the program by offering practical, relevant feedback about lesson delivery (Thompson, Paek, Goe, & Ponte, 2005). This recommendation acknowledges the roles that student engagement and classroom management play in effective instruction. The constructs should not be treated as separate skill sets but rather as moving pieces that work together to create authentic student learning. Observation and constructive critique of real lessons would allow

mentors or coaches to address the ways the three constructs impact learning. Moreover, novice teachers should watch videos of their instruction. This practice empowers teachers to reflect on their strengths and weaknesses and see the three constructs' interdependency in their classroom setting. According to Runyan (1991), effective induction programs are designed from the philosophical orientation of assisting novice teachers in the identification of their needs and subsequently providing access to resources to meet those needs. Teachers who are self-aware and possess an understanding of the complex interplay of all three constructs are more likely to have impactful conversations with support personnel.

Research that spans several decades shows that students become less engaged at school as they move from elementary to middle to high school (Marks, 2000; McDermott et al., 2001). By high school, as many as 40-60% of students are chronically disengaged from school, excluding those who have already dropped out of school (Klem & Connell, 2004). Student engagement is an undeniably important construct that is interconnected with instruction and management. Learning to engage students and maintain their attention through an entire lesson requires practical knowledge, practice, and support to master. Within the focus group, no teacher described the program as impactful on developing skills to engage students. Four teachers stated that the induction program provided "very little" support for engaging students in active learning but could not recall any resources, professional development, or mentor/coach support specifically related to student engagement. The remainder of the focus group said the program lacked any component whatsoever that pertained to student engagement. As previously discussed, student engagement is the natural result of effective differentiation in planning and lesson delivery. Teachers did not acknowledge this connection and communicated a desire for

“strategies to grab students’ attention.” Once again, a live or recorded observation, coupled with constructive critique and feedback discussion with new teachers could positively shape teacher efficacy levels within this domain. This application-type support would answer teachers’ call for best practices. A weakness in any other construct may impact student engagement. Through observation, the expert may reveal a weakness in planning, building relationships with students, or classroom management that presents as a student engagement skill deficit.

The focus group perceived classroom management as the most positively impacted construct through the induction program. Two teachers indicated that the program was “helpful” in developing routines, procedures, and behavior expectations. A lateral entry teacher described a significant impact due to her lack of formal training in education. Teachers agreed that management was a priority for the program, reflected in the topics of required professional development; however, teachers were dissatisfied with the passive lecture format of support. Teachers unanimously agreed that they needed a more active role in the professional development instead of printed handouts. Although the printed material was described as “good” quality, teachers felt they had no time to read the handouts during that first year in the classroom. The researcher recommends a shift away from an abundance of printed information. Teachers need opportunities to play an active role during professional development (Wei et al., 2009). Role-playing through challenging scenarios offers practical application of learned best practices. The aforementioned observation, constructive critique and discussion protocol between mentors and mentees would allow teachers to practice management skills and receive specific advice related to their unique classroom environment from education experts. Feedback from experts who observed teaching during the professional learning

intervention effectively enhance teacher self-efficacy (Beauchamp et al., 2014).

During the focus group discussion, teacher opinions of the program's strengths and weaknesses surfaced. Teachers who described the program's impact on their professional growth as "little" or "some" attributed their positive response to peer support, not the program. Although peer collaboration was intentionally integrated into the program's framework, teachers perceived themselves as helping one another despite the program. Most teachers perceived coaching sessions as "unstructured" and "a waste of time." Although teachers acknowledged the usefulness of time devoted to discussions and sharing ideas with fellow new educators, five of seven teachers did not perceive coaching sessions as impactful because entire sessions were limited to only peer collaboration. Teachers expressed disappointment in the program's support efforts and reliance upon one another for ideas that worked well for first-year colleagues. Interestingly, according to the program coordinator, the district expects every coach to prepare an agenda for each session, depending on the time of year. For example, a coaching session in October should address sending home report cards and conducting parent conferences. This district expectation is in stark contradiction to teacher reports of lack of leadership during coach sessions. There is no apparent measure of accountability for coaches; therefore, the researcher suggests mandating submission of agendas to a designated program employee prior to each coaching session. Coaches should collaboratively develop a rubric of evaluation to evaluate agendas for well-planned, data-driven coaching sessions. To capitalize on the identified program strength, coaching sessions should continue to include a portion of designated time for peer discussion. While there is definitive benefit to peer collaboration, novice teachers also benefit from the coach's guidance (Ross & Bruce, 2007). Therefore, a hybrid approach that includes

both formal, well-planned support and unstructured time for peer collaboration is recommended.

To address Research Question 3, the researcher interviewed the program coordinator who is responsible for program implementation and decision making. During the interview, the program coordinator gave a copy of the goals and framework of the induction program, the schedule of beginning teacher meeting dates, calendar of professional development workshops and descriptions, and handbooks of mentor procedures and guidelines to the researcher. The researcher evaluated the program to identify four induction best practices: a multi-day orientation, a knowledgeable and supportive mentor, sustained and rigorous professional development, and regular program evaluation.

Interview and document analysis revealed the support elements, attention to the measured domains, and best practices embedded within the program's design. The first step for beginning teachers is an orientation session to acclimate new teachers to the school and culture prior to student arrival (Reeder, 2013; Wong, 2004; Wood & Stanulis, 2009). The district plans a 3-day orientation prior to student arrival. There is apparent intent to provide an encompassing orientation by familiarizing new teachers with the district's vision, policies, procedures, job-related duties, curriculum, and teacher evaluation process. Planned professional development sessions are interwoven into the orientation schedule and address classroom management, lesson planning (instruction), and student engagement (building relationships). Program designers' deliberate efforts to incorporate the best practice of a multi-day orientation are evident.

The second best practice, a knowledgeable mentor, is also apparent in the program framework. In addition to the state-mandated training, mentors must also

complete district training to ensure understanding of mentor responsibilities, resources, and expectations. The district developed a mentor handbook to communicate the knowledge, skills, and attitudes expected of each mentor. The district expects a minimum of one contact per week with the beginning teacher and maintenance of a monthly mentor log with signatures of the new teacher and mentor. The monthly log demonstrates an effort to hold mentors accountable. A well-thought-out Calendar of Needs and Concerns of Novice Teachers was developed by district personnel to guide mentors through relevant topics that typically require mentor support. Development of district guidelines, policies, and mentor training to ensure quality mentor support is evidence of deliberate intent to provide a knowledgeable and supportive mentor to every beginning teacher.

Despite the district's efforts to implement a high quality mentor program, teacher perceptions of the mentor component were dynamic. Teachers were nearly evenly divided, with four positive descriptions of the mentee experience and three teachers who reported negative experiences. Poorly structured mentor programs can have a lasting, negative effect on beginning teachers and impede new teacher growth (Hansford et al., 2004; Whisnant et al., 2005). The mentor is the only component of the program that extends beyond year 1 for new teachers; therefore, it is imperative that all mentors meet the district's high standards.

Although four focus group teachers had positive experiences with their mentor, several mentors failed to meet district expectations according to the three focus group members. Teachers explained their sense of discomfort, as new teachers and new employees of the district, to report a mentoring issue. Teacher 4 explained that reporting a concern about a mentor draws more attention to teachers who already feel

overwhelmed. Another teacher stated that she only saw her mentor at staff meetings and never had private, constructive discussions; yet she signed the mentor log for her mentor. Although the teacher knew that the district's expectation was not met, pressure to go along and "not rock the boat" persuaded her to sign the monthly log. Another teacher remembered crying because of the hurtful words said to her by her mentor. The mentee assumed that the mentor lacked motivation because of her approaching retirement date. Finally, a teacher explained that her mentor did not teach at the mentee's school. This led to less and less contact until there was none. The teacher expressed surprise that mentors are supposed to support mentees 3 full years. She claimed to have had only 1 year of sporadic contact with the mentor. After a reassignment to a new mentor, neither mentor nor mentee made further contact. The teacher resigned herself to depending on her teaching team, not a mentor. The flexible, individualized support that one can glean from a mentor is vital to new teachers. Although the majority of the focus group had productive relationships with their mentor, the damaging effect of nonsupportive mentors necessitates a more thorough examination of the program's mentor component.

Beginning teacher needs change, as reflected in the mentor Calendar of Needs (Yopp & Young, 1999). The researcher recommends a district mandate for mentors to observe mentees in the fall, winter, and spring. Observations may be live or recorded to be viewed at the mentors' convenience. Mentors should submit their anecdotal notes about their observations to coaches. A monthly log entry, signed by mentors and mentees, should reflect the follow-up discussion date and key points of the mentors' observation. Best practices should remain at the forefront of the mentors' attention, as they guide mentees through the individual challenges they face. Just as students arrive with a broad range of abilities and needs, new teachers also come with a variety of

background experiences. Teachers benefit from the type of individualized support offered through direct observation and feedback (Wong, 2004). Coaches should use mentor notes to plan coaching session agendas. The hybrid model of peer collaboration time, paired with a purposefully planned support session, would make the coaching session more meaningful and aligned to the needs of the coach's assigned teachers.

The researcher analyzed the program for the third identified best practice: sustained and rigorous professional development. Training and supporting new teachers through quality professional development is a major step in raising student achievement (Alliance for Excellent Education, 2004; Ingersoll & Strong, 2011). Professional development should occur regularly and focus on building educator knowledge, make instruction more effective, and raise student achievement (Wei et al., 2009). The researcher noted a lack of rigorous professional development in student engagement and instructional support compared to the required classroom management training. Students who have a positive relationship with their teacher are more likely to actively engage for longer periods of time and retain more information (Shoulders & Krei, 2015). Therefore, the two relationship training sessions align to the engagement construct, but the professional development within the construct is limited to relationships. Instructional support is also present but limited to lesson planning professional development. There is no evidence of deliberate support in implementing instructional best practices. The recommendation of three mentor observations and feedback would provide the specific support needed most by teachers. All three constructs would be supported through this recommended protocol.

Professional development geared toward new teacher needs is not supported beyond the first year in the classroom. This lack of professional development in years 2

and 3 is a major weakness in the district's induction program. Additionally, limited interpretation of support in student engagement and instructional strategies suggests that this best practice is present in the program framework but in a limited capacity. The researcher recommends extending professional development opportunities into years 2 and 3 for new teachers. New teachers cannot be considered experts after the first year, and most new teachers still require assistance into their second and third years of teaching (Fideler & Haselkorn, 1999). Research demonstrates that teacher needs change in second and third years, so additional support is required to cultivate highly effective educators (Yopp & Young, 1999). A limited budget may restrict the district's ability to pay for continued professional development. Until money is made available to extend training, the mentor component remains a vital part of the program. As the only element of support in years 2 and 3, the district should elevate its expectation and accountability for mentors in these years. Requiring three observations, spaced throughout the year, and documentation of the follow-up constructive feedback would provide a level of individualized support in whatever area of need demonstrated by the teacher in his/her real classroom setting.

The final best practice examined in this study was regular, comprehensive, and informative program evaluation. According to Wood and Stanulis (2009), regular evaluation offers information about needs of the program and areas for improvement. The program coordinator cited multiple sources of data that inform decisions related to the program design including informal principal feedback, annual peer reviews with a neighboring district and state rubric, teacher retention rates, discipline referral rates, teacher evaluation data, and student achievement records. A clear designation of responsibility to evaluate these multiple data sources was not present. Time constraints

and additional district responsibilities prevent the program coordinator from personally examining multiple data sources to inform decision making. Resources can only be valuable if intentional effort is made to utilize them to reflect on the program's strengths and weaknesses. Therefore, a comprehensive program evaluation is not evident.

The researcher noted that all data sources listed by the program coordinator are summative in nature. Although strengths and weaknesses may be extrapolated from this data, decisions about professional development offerings for the next cohort are based on the outgoing cohort's perceptions of needs and program support. Mentor anecdotal notes could serve as formative assessments of teacher needs and challenges. These data should inform program facilitators of current needs for support and the type of support that is most impactful to the particular teachers in the program. A comprehensive program evaluation that considers all stakeholder perceptions of the program is not evident.

The researcher recommends hiring an independent agency to conduct a thorough program evaluation that considers all stakeholder input. Britton et al. (2000) argued that thorough, regular program evaluations that involve participants and all stakeholders are critical to ensure continuous program effectiveness and improvement. The evaluator(s) should aim to answer the questions: How is the program impacting student achievement? How does induction support impact teacher retention rates? What is the district's average attrition rate over ten years compared to the 62% loss of teachers between 2012-2016? What needs do stakeholders perceive as unsupported by the program?

To benefit from this best practice and ensure program fidelity across one of North Carolina's largest districts, a thorough evaluation is necessary. Hiring an independent agency with budget constraints is a consideration; however, research demonstrates that it is fiscally irresponsible not to directly invest in high-quality induction (Smith & Ingersoll,

2004). The Alliance for Excellent Education (2004) suggested that comprehensive induction programs have a payoff of \$1.37 for every \$1 that is invested in quality BTSPs. Although investing in the induction program requires more money immediately, greater teacher retention will net considerable savings in the future. In addition to the financial benefit, stability of high-quality teachers in the classroom also impacts student achievement.

Implications of Findings

The district's induction plan has strengths and weaknesses. Purposeful design and utilization of multiple induction best practices are evident. Teachers reported high self-efficacy in all three constructs; yet in a random focus group, an overwhelming majority of responses regarding the effectiveness of the program were very negative. The need for more application-oriented support and training surfaced repeatedly. Teachers expressed the need for help in transitioning from education theory to real-world practice. Despite a well-structured program and genuine effort to meet the needs of new teachers, new teachers did not perceive the program as impactful due to a lack of application-oriented support.

Money and time are scarce resources and should be invested wisely. The district, state, and nation stand at the same crossroads: either continue to spend millions of dollars to constantly train new crops of teachers, resulting in negative impact on student achievement, or adapt current induction programs to include more application-focused support (Corbell, 2009; Thompson et al., 2005). Beginning teachers typically feel overwhelmed and full of self-doubt. Through a series of observations and supportive reflections with mentees, mentor recognition of teacher strengths may empower and encourage teachers, thereby building teacher resiliency (Wei et al., 2009). Mentors and

teachers should choose areas of weakness from videoed lessons to design a professional development plan to strengthen teacher skill sets. As described in Chapter 4, the researcher identified areas of need through evaluation of TSES data trends. Each of the identified weaker areas could be effectively addressed by the recommended application-based support protocol. Capturing a lesson digitally allows mentors to review teacher performance at a convenient time and gives teachers a different perspective for self-reflection. The availability of cellular phone cameras and free recording applications make this type of practical support appealing to districts with monetary constraints. The focus of this kind of support is on bridging theory to authentic application in the classroom to positively impact student achievement (Darling-Hammond, 2010; Thompson et al., 2005). Therefore, this study and its recommendations contribute to the policy discussion in the state and nation regarding the appropriate structure and costs of effective new teacher support.

This study informs the practice of induction programs that aim to develop and retain highly qualified teachers. To develop high quality career teachers, the researcher feels that North Carolina should elevate the statewide expectations to include three mentor observations; submission of anecdotal notes for accountability and assurance of quality feedback; and logged date, time, and discussion points of follow-up discussions with mentees that inform the mentees' professional growth plan. Currently, state policy mandates at least three observations for beginning teachers annually by a qualified school administrator or a designee. By designating this responsibility to mentors, meetings with mentees may be data driven and individualized to maximize support in teachers' specific areas of need.

North Carolina established five BTSP standards to guide LEAs in the

development of induction programs. The state grants much freedom to LEAs and results in a variety of program structures across the state. Districts depend on the state's investment in high-quality induction to provide the services needed to develop high-quality educators. The Alliance for Excellent Education (2004) published findings that indicate comprehensive induction programs have a payoff of \$1.37 for every \$1 that is invested in quality BTSP. Unfortunately, North Carolina's financial investment in induction support has been historically inadequate. Lack of funding results in detrimental holes in support services such as nonexistent program evaluation and professional development limited to teachers' first year, as seen in the district under study. The state developed the BTSP standards and therefore has an obligation to provide adequate funding to LEAs to meet the standards. Liam Goldrick, policy director at NTC, underscored the state's critical responsibility to evaluate and provide oversight (Mader, 2016). It is the state's burden to provide real oversight to evaluate the impact of the program on teacher turnover and student learning (Mader, 2016).

Theory. The researcher evaluated induction support to identify opportunities embedded within the program framework that capitalize on Bandura's (1997) four sources of self-efficacy: verbal persuasion, vicarious experience, mastery experiences, and physiological state. Peer collaboration was a clear strength of the district's program. Focus group participants communicated an appreciation for the collaborative opportunities during coach sessions. Positive verbal input from others in the field strengthens teacher beliefs in their capacity to be an effective educator (Tschannen-Moran & McMaster, 2009). Verbal persuasion most often comes in the form of professional development workshops that introduce a new strategy. The focus group's description of professional development as "sit and get" and "hand-out heavy" implies

that training sessions place teachers in passive roles of receiving knowledge. This role limits teacher input and practical application of the new strategy or skill. Application-oriented support such as the recommended observation, critique, and feedback model provides more opportunities for authentic, positive verbal persuasion. Positive verbal input engages the cyclical nature of efficacy. Verbal persuasion can empower a new teacher to give greater effort, which leads to a stronger sense of efficacy. Verbal persuasion is not a primary source of efficacy by itself. When coupled with other sources of efficacy, it may supply the reassurance needed to ignite teacher efforts to strengthen their teaching skills (Tschannen-Moran & McMaster, 2009).

Bandura's (1997) second source of self-efficacy is vicarious experience. Through observation of a master teacher, the master teacher provides a standard which can help new teachers set goals for his or her professional growth (Bandura, 1997). The researcher concluded that the program under study lacks any vicarious experiences to build self-efficacy. There is no apparent expectation or intent to facilitate observations of master teachers by new teachers. The 2016 North Carolina Working Conditions Survey results specific to the district under study revealed that 58% of new teachers in the district reported never observing mastery teaching of their mentor and an additional 26% observed mastery teaching less than once per month. Although the survey communicates a different teacher cohort's responses, it provides additional support that vicarious experiences are not a priority or expectation of the induction support program. The researcher recommends providing new teachers with three half-days, spaced through the year, to observe master teachers in their building. If granting half-day opportunities for observations is not feasible, mentors may record lessons and send to mentees to review at their convenience. Teachers should take notes about best practices observed, document

any questions, and notate relevant information to guide the follow-up discussion between mentor and mentee. Through vicarious experiences, teachers develop self-reflection skills (Tschannen-Moran et al., 1998). Empowering induction programs assist novice teachers in the identification of their needs through self-reflection and subsequently provide access to resources to meet those needs (Runyan, 1991). Vicarious experience should also be infused into professional development workshops. If the vicarious experience is limited to watching the presenter, it is less likely to be impactful (Tschannen-Moran & McMaster, 2009). Seeing skills and strategies in action through videoed or live lesson demonstrations can offer valuable insight into the application of the new strategy or skill.

Mastery experiences are the third and most influential of Bandura's (1997) sources of self-efficacy. Mastery experiences are most impactful because they offer first-hand evidence of teacher abilities to succeed. Successes in the classroom build positive self-efficacy, especially when successes are achieved in the first years of teaching (Tschannen-Moran & McMaster, 2009). The program offers few opportunities for teachers to actively pursue mastery of best practices. Mastery experience is the objective of the researcher's recommended protocol. Multiple mentor observations, constructive feedback and supportive discussions with mentees, and the coauthorship of new teacher professional development plans are actions aimed at cultivating mastery experiences in the classroom. Mentors should provide focused, individualized support in the application of new skills, thereby increasing the likelihood of mastery experience (Ingersoll, 2012).

Bandura's (1997) fourth source of self-efficacy is physiological arousal. Arousal includes elevated heart and respiratory rates, increased perspiration, or shaking hands. These physiological responses may have positive or negative effects, depending on

teacher perceptions (Tschannen-Moran & McMaster, 2009). This source of efficacy is least present in the program. There is no evidence of intent to build efficacy through physiological arousal. The researcher recommends a change in professional development workshop format. Rather than playing a passive, receptive role in training workshops, program facilitators should grant teachers opportunities to practice a new strategy in a workshop atmosphere with the available encouragement and support of teacher-leaders (Tschannen-Moran & McMaster, 2009). This method of training reduces the sense of fear of failing on the first attempt in front of students. More opportunities to practice skills in training sessions may decrease nervous physiological responses in teachers. With each success comes a new mastery experience and associated physiological responses of pride, exhilaration, and satisfaction (Tschannen-Moran & McMaster, 2009).

The researcher suggests adapting the program structure to intentionally provide more vicarious and mastery experience opportunities for new teachers. The researcher believes that program designers should acknowledge the importance of physiological arousal and teacher perceptions of safety in the professional development setting as opportunities for new teachers to practice application of new skills, thereby gaining confidence and increasing likelihood of success in the classroom (Tschannen-Moran & Hoy, 2007). These notions are applicable to all induction programs in the state and contribute to the ongoing professional conversation about developing high-quality teachers.

Limitations

The researcher acknowledges a limited response rate and small sampling size. The study relied on respondent willingness to voluntarily answer 24 TSES items and participate in a 40-minute focus group discussion. The researcher actively collected data

in April when teachers often feel overwhelmed. Most teachers perceive time and energy as scarce in the spring semester. The 32 TSES participants did not fairly represent all subgroup demographics. A singular focus on fourth-year teachers, those who most recently completed the program, restricted sample size and response rate. The loss of 62% of teachers from the 2012-2013 induction cohort further restricted the available sample set. As a result, survey and focus group participation was limited. The researcher contacted the entire population of fourth-year teachers who were involved in the 2012-2013 induction program through three emailed reminders to encourage participation. Days before the close of the TSES window, the researcher also contacted all principals to request assistance in encouraging participation from their fourth-year teachers. These efforts yielded a 41% response rate and a seven person focus group.

The abstract concept of efficacy is multidimensional and complex. For more than 4 decades, efficacy researchers have struggled to develop a reliable and valid instrument to isolate and measure efficacy. Literature suggests that teacher efficacy could be shaped by a number of situational factors including size of class (Glass & Smith, 1979), characteristics of students (Brophy & Evertson, 1981; Good & Grouws, 1979), context of subject matter (McDonald & Elias, 1976), instructional design (Bossert, 1979), and the context in which the teacher works (Ashton & Webb, 1986). The effects of these elements as well as those of the home, community, and culture play a role inside classrooms, thereby affecting teacher efficacy (Ashton & Webb, 1986). Although these indirect influences were not expressly measured in this study, the researcher attempted to minimize this limitation by using the TSES. Reliability and validity of the instrument are well established through multiple published studies.

A final limitation is the subjectivity of the self-report method. Self-reporting may

have produced findings different from what participants actually do or feel in real-world settings (Foss & Waters, 2007). The researcher discussed this phenomenon earlier in this chapter. TSES item scenarios in which a low self-efficacy rating may damage teacher self-image were scored higher than the construct's mean value of 7. Similarly, scenarios that depict teachers as in direct control, and therefore responsible for the outcome, were scored higher than the mean. Scenarios in which students were in control of the environment and the teacher was forced to react were scored lower than the mean. Teacher physiological responses in the moment of a real-world scenario influence decisions. Projecting themselves into a fictional scenario permits time to calmly and rationally consider options. Although self-reporting is inherently subjective, the researcher evaluated several sources and types of data to evaluate the program's effectiveness. By triangulating data sources and using them to build a coherent justification for themes presented in this chapter, the researcher answered the limitation and preserved the study's validity.

This study addressed self-efficacy in one of North Carolina's largest, urban school districts. Results may be generalizable to other districts with similar size and demographics. LEAs retain authority over induction program design so programs vary across the state and country. Therefore, findings may be most applicable to programs with similar support elements and available resources. The researcher's suggestions to strengthen new teacher support address challenges that typically plague induction support efforts all over the state and country. The researcher believes that application-oriented support, as described in this chapter, should be a staple in all high-quality induction programs.

Recommendations for Future Research

The focus group's discussion cast a shadow over the effectiveness of the mentor program. Three of seven focus group teachers expressed significant negative feelings about their mentor relationship. Research shows that negative mentor experiences can have lasting, damaging effects (Wood, 2001). Based on the 2016 NCTWCS data about the district under study, 33% of new teachers during 2015-2016 described mentor support to identify student needs as "none" to "hardly any at all." Approximately 30% of mentees reported never meeting with their mentor to develop lesson plans. Fifty-eight percent of new teachers in the district never observed mastery teaching of their mentor and 33% of new teachers in this district did not analyze student work or assessment data with their mentor. The 2016 survey data illuminates ongoing problems within the mentor program that echo many of the same concerns expressed by fourth-year teachers and weaknesses in self-efficacy identified through TSES data. As the sole support effort in years 2 and 3, further study of the mentor program is needed to establish a rate of fidelity in which mentors meet district expectations.

The researcher recommends future study to investigate the phenomena of high self-efficacy reported in combination with a substantially low teacher perception the program's impact on their professional growth. How did teachers gain reported levels of self-efficacy, if not through one or more pillars of the program? Did self-reporting method lead to inflated self-efficacy ratings? Does the illogicality of the data cast doubt on the validity of the quantitative data? Perhaps it points to alternative ways in which teacher self-efficacy may be developed. Future research is necessary to address these questions.

The researcher recommends future study to evaluate all stakeholders' degree of

involvement in the design and implementation of the program. Additionally, an alarmingly high district rate of attrition between 2012-2016 necessitates a quantitative study to establish an average attrition rate over a longer period of time. Analysis of multiple data sources should establish the district's financial and achievement costs related to attrition. Future study should include an evaluation of the induction program's impact on raising student achievement; reducing the achievement gaps based on race, gender, and SES; and the teacher attrition rate.

This research study illuminated strengths and weaknesses in new teacher support provided by one of the largest districts in North Carolina. Findings may inform stakeholders and influence policy changes to strengthen support to new teachers. Research shows that high-quality induction services reduces teacher turnover and increases job satisfaction. This study also sought to refocus education leaders' attention to the importance of building self-efficacy in novice teachers. Following the researcher's recommendations will strengthen the program and serve as a model for other districts. Replication of successes may inform state policy.

References

- Alliance for Excellent Education. (2004, June 23). *Tapping the potential: Retaining and developing high quality new teachers*. Washington, DC. Retrieved from <http://all4ed.org/reports-factsheets/tapping-the-potential-retaining-and-developing-high-quality-new-teachers/>
- Alliance for Excellent Education. (2005, August 1). *Teacher attrition: A costly loss to the nation, and to the states*. Washington, DC: Retrieved from <http://all4ed.org/reports-factsheets/teacher-attrition-a-costly-loss-to-the-nation-and-to-the-states/>
- Allinder, R. M. (1994). The relationship between efficacy and practices of special education teachers and consultants. *Teacher Education and Special Education*, 17, 86-95.
- American Federation of Teachers. (2001). *Educational issues policy brief*. Report No. 13. Washington, DC: AFT Educational Issues Department.
- Anderman, E. M., Patrick, H., Hruda, L. Z., & Linnenbrink, E. (2002). Observing classroom goal structures to clarify and expand goal theory. In C. Midgley (Ed.), *Goals, goal structures, and patterns of adaptive learning* (pp. 243-278). Mahwah, NJ: Erlbaum.
- Anderson, R., Greene, M., & Loewen, P. (1988). Relationships among teachers' and students' thinking skills, sense of efficacy, and student achievement. *Alberta Journal of Educational Research*, 34(2), 148-165.
- Anderson, L., & Krathwohl, D. A. (2001). *Taxonomy for learning, teaching and assessing: A revision of bloom's taxonomy of educational objectives*. New York: Longman.
- Appleton, J. J., Christenson, S. L., Kim, D., & Reschly, A. L. (2006). Measuring cognitive and psychological engagement: Validation of the student engagement instrument. *Journal of School Psychology*, 44, 427-445.
- Arends, R. I., & Rigazio-DiGilio, A. J. (2000). *Beginning teacher induction: Research and examples of contemporary practice*. Paper presented at the annual meeting of the Japan-United States Teacher Education Consortium. (ERIC Document Reproduction Service No. ED450074)
- Ashton, P. T., & Webb, R. B. (1986). *Making a difference: Teachers' sense of efficacy and student achievement*. White Plains, NY: Longman.
- Ashton, P., Webb, R., & Doda, N. (1983). *A study of teachers' sense of efficacy*. Gainesville, FL: University of Florida. (ED 231833).

- Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice Hall.
- Bandura, A. (1978). The self system in reciprocal determinism. *American Psychologist*, 33, 344-358.
- Bandura, A. (1981). Self-referent thought: A developmental analysis of self-efficacy. In J. Flavell & L. Ross (Eds.), *Social cognitive development. Frontiers and possible future* (pp. 200-239). Cambridge: Cambridge University Press.
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, 37(2), 122-147.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. New Jersey: Prentice-Hall.
- Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist*, 28, 117-148. doi:10.1207/s15326985ep2802_3
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W. H. Freeman.
- Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology*, 52, 1-26.
- Banks, J., Conway, P., Darmody, M., Leavy, A., Smyth, E., & Watson, D. (2015). Review of the Droichead Teacher Induction Pilot Programme. *Working Paper*. Dublin: ESRI.
- Bartlett, L., & Johnson, L. S. (2010). The evolution of new teacher induction policy: Support, specificity, and autonomy. *Educational Policy*, 24, 847-871. Retrieved from <http://dx.doi.org/10.1177/0895904809341466>
- Bear, G. G., Cavalier, A., & Manning, M. (2005). *Developing self-discipline and preventing and correcting misbehavior*. Boston: Allyn & Bacon.
- Beauchamp, L., Durksen, T., Klassen, R., Parsons, J., & Taylor, L. (2014). *Final report: Exploring the development of teacher efficacy through professional learning experiences*. Retrieved from <https://www.teachers.ab.ca/SiteCollectionDocuments/ATA/Publications/Professional-Development/PD-86-29%20teacher%20efficacy%20final%20report%20SM.pdf>
- Beginning Teacher Support Program Standards [policy pdf]. (2011, March). Retrieved from <http://www.ncpublicschools.org/docs/educatoreffectiveness/regional/jobfairs/beginning-teacher-standards.pdf>

- Berman, P., McLaughlin, M., Bass, G., Pauly, E., & Zellman, G. (1977). *Federal programs supporting educational change. Vol. VII: Factors affecting implementation and continuation (Report No. R-1589/7-HEW)*. Santa Monica, CA: The Rand Corporation (ERIC Document Reproduction Service No. 140432).
- Bloom, B. S., & Krathwohl, D. R. (Eds.). (1956). *Taxonomy of educational objectives: The classification of educational goals, by a committee of college and university examiners. Handbook 1: Cognitive domain*. New York, NY: Longman.
- Bonner, L. (2016). Enrollment plunges at UNC teacher prep programs. *News & Observer*. Retrieved from <http://www.newsobserver.com/news/local/education/article58311743.html>
- Bossert, S. T. (1979). *Tasks and social relationships in classrooms: A study of instructional organization and its consequences*. New York: Cambridge University Press.
- Boutelle, J. (2009) *Factors influencing teacher retention in an urban secondary school district*. Arizona State University. Retrieved from <http://search.proquest.com/openview/cdc43926ff4ab48a5278e10ae5b25f68/1?pq-origsite=gscholar&cbl=18750&diss=y>
- Breaux, A., & Wong, H. (2003). *New teacher induction: How to train, support, and retain new teachers*. Mountain View, CA: Harry K. Wong Publications.
- Brenneman, R. (2015, October 13). Teacher attrition continues to plague North Carolina. *Education Week*. Retrieved from <http://www.edweek.org/ew/articles/2015/10/14/teacher-attrition-continues-to-plague-north-carolina.html>
- Brewster, C., & Railsback, J. (2001). *Supporting beginning teachers: How administrators, teachers, and policymakers can help new teachers succeed*. Portland, OR: Northwest Regional Educational Laboratory.
- Bridgeland, J. M., Dilulio, J. J., & Morison, K. B. (2006). *The silent epidemic- Perspectives of high school dropouts*. Washington, DC: Civic Enterprises. Retrieved from <http://www.civicenterprises.net/pdfs/thesilentepidemic3-06.pdf>
- Brissie, J. S., Hoover-Dempsey, K. V., & Bassler, O. C. (1988). Individual, situational contributors to teacher burnout. *The Journal of Educational Research*, 82(2), 106-112.
- Britton, E., Raizen, S., Paine, L., & Huntley, M. A. (2000, March 6-7). *More swimming, less sinking: Perspectives on teacher induction in the U.S. and abroad*. Paper presented to the National Commission on Mathematics and Science Teaching for the 21st Century. Washington, DC: West Ed. Retrieved July 25, 2005, from http://www.wested.org/online_pubs/teacherinduction/.

- Brophy, J. (1988). Educating teachers about managing classrooms and students. *Teaching and Teacher Education*, 4(1), 1-18.
- Brophy, J. (1998). *Motivating students to learn*. Boston, MA: McGraw Hill.
- Brophy, J. (2004). *Motivating students to learn* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum.
- Brophy, J. (2006). History of research on classroom management. In C. M. Evertson & C. S. Weinstein (Eds.), *Handbook of classroom management: Research, practice, and contemporary issues* (pp. 17-43). Mahwah, NJ: Lawrence Erlbaum Associates.
- Brophy, J. E., & Evertson, C. M. (1981). *Student characteristics and teaching*. White Plains, NY: Longman.
- Brophy, J. E., & Good, T. (1986). Teacher behavior and student achievement. In M. Wittrock (Ed.), *Handbook of research on teaching* (3rd ed., pp. 328-375). New York: Macmillan.
- Brouwers, A., & Tomic, W. (2000). A longitudinal study of teacher burnout and perceived self-efficacy in classroom management. *Teaching and Teacher Education*, 16, 239-254.
- Buchanan, J. (2006). What they should have told me: Six beginning teachers' reflections on their pre-service education in the light of their early career experiences. *Curriculum Perspectives*, 26(1), 47-56.
- Buchanan, J. (2009). Where are they now? Ex-teachers tell their life-work stories. *Issues in Educational Research*, 19(1), 1-13.
- Buchanan, J. (2010). May I be excused? Why teachers leave the profession. *Asia Pacific Journal of Education*, 30(2), 199-211.
- Buchanan, J., Prescott, A., Schuck, S., Aubusson, P., Burke, P., & Louviere, J. (2013). Teacher retention and attrition: Views of early career teachers. *Australian Journal of Teacher Education*, 38(3).
- Bullough, R. (1987). Accommodation and tension: Teachers, teacher role, and the culture of teaching, in J. Smyth (Ed.) *Educating Teachers: changing the nature of pedagogical knowledge*. Lewes: Falmer Press.
- Bullough, Jr., R. V. (2012): Mentoring and new teacher induction in the United States: A review and analysis of current practices, mentoring & tutoring. *Partnership in Learning*, 20(1), 57-74.

- Burbules, N. C., & Torres, C. A. (2000). Globalization and education: An introduction. In N. C. Burbules & C. A. Torres (eds.), *Globalization and education: Critical perspectives* (pp. 1-26). New York: Routledge.
- Chang-Miller, A. (2009). *Do teacher induction programs matter? Stories of the first year, urban, middle school teachers regarding their involvement with the beginning teacher support and assessment program*. Dissertation, Pepperdine University, United States-California. (Publication No. AAT 39518160).
- Christenson, S. L., & Thurlow, M. L. (2004). School dropouts: Prevention considerations, interventions, and challenges. *Current Directions in Psychological Science*, 13, 36-39.
- Chwalisz, K., Altmaier, E. M., & Russell, D. W. (1992). Causal attributions, self-efficacy cognitions, and coping with stress. *Journal of Social and Clinical Psychology*, 11(4), 377-400.
- Clarke, D., & Hollingsworth, H. (2002). Elaborating a model of teacher professional growth. *Teaching and Teacher Education*, 18(8), 947-967.
- Clotfelter, C., Ladd, H., & Vigdor, J. (2007). *How and why do teacher credentials matter for student achievement?* CALDER Working Paper 2. Washington, DC: The Urban Institute.
- Coladarci, T. (1992). Teachers' sense of efficacy and commitment to teaching. *Journal of Experimental Education*, 60, 323-337.
- Connell, R. (2007). Teachers. In R. Connell, C. Campbell, M. Vickers, A. Welch, D. Foley, N. Bagnall, & D. Hayes (Eds.). *Education, change and society* (pp. 262-279). South Melbourne: Oxford University Press.
- Cook, C., Heath, F., Thompson, R. L., & Thompson, B. (2000, October). *Score reliabilities in Web- or Internet-based surveys: Unnumbered graphic rating scales versus Likert scales*. Paper presented at the Association of Research Libraries (ARL) Measuring Service Quality Symposium on the New Culture of Assessment: Measuring Service Quality, Washington, DC.
- Corbell, K.A. (2009, August). *Strategies that can reduce new teacher attrition in North Carolina*. Raleigh, NC: The William & Ida Friday Institute for Educational Innovation, North Carolina State University College of Education.
- Corbin, J., & Strauss, A. (2008). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (3rd ed.). Thousand Oaks, CA: Sage.
- Creswell, J. (2014). *Research design qualitative, quantitative, and mixed methods approaches* (4th ed.). Thousand Oaks, CA: Sage.

- Cunningham, D., & Nogle, S.A. (1996). Implementing a semesterized block schedule: Six key elements. *High School Magazine*, 5(3), 29-33.
- Czerniak, C. M., & Shriver, M. L. (1994). An examination of preservice science teachers' beliefs and behaviors as related to self-efficacy. *Journal of Science Teacher Education*, 5(3), 77-86.
- Darling-Hammond, L. (1997). *Doing what matters most: Investing in quality teaching*. New York: The National Commission on Teaching and America's Future.
- Darling-Hammond, L. (2000). *Solving the dilemmas of teacher supply, demand, and standards: How we can ensure a competent, caring, and qualified teacher for every child*. National Commission on Teaching & America's Future. (EDRS Document Reproduction Service No. Ed 463337).
- Darling-Hammond, L. (2005). Teaching as a profession: Lessons in teacher preparation and professional development. *Phi Delta Kappan*, 87(3), 237-240.
- Darling-Hammond, L. (2010, Oct.). *Evaluating teacher effectiveness: How teacher performance assessments can measure and improve teaching*. Washington, DC: Center for American Progress. Retrieved from <http://files.eric.ed.gov/fulltext/ED535859.pdf>
- Darling-Hammond, L., & Baratz-Snowden, J. (2005). *A good teacher in every classroom: Preparing the highly qualified teachers our children deserve*. San Francisco, CA: John Wiley & Sons.
- Darling-Hammond, L., & Bransford, J. (2005). Introduction. In L. Darling-Hammond & J. Bransford (Eds.) *Preparing teachers for a changing world: What teachers should learn and be able to do* (pp. 1-39). San Francisco, CA: Jossey-Bass.
- Davies, B. (2004, March). *Teacher efficacy in the context of teaching low achieving students*. Paper presented at the annual meeting of the Australian Association of Reading Education, Sydney.
- Dibapile, W. (2012). *Teacher efficacy and classroom management among Botswana junior secondary school teachers* (Doctoral Dissertation). Retrieved from http://trace.tennessee.edu/cgi/viewcontent.cgi?article=2567&context=utk_graddis
- Doyle, W. (1986). Classroom organization and management. In M. Wittrock (Ed.), *Handbook of Research on Teaching* (3rd ed., pp. 392-431). New York: Macmillan.
- Doyle, W. (2006). Classroom organization and management. In M.C. Wittrock (Ed.), *Handbook of research on teaching* (3rd ed.). New York: Simon and Schuster.

- Projects in Education. (2000). *Quality counts 2000* (Education Week No 18). Retrieved from <http://www.edweek.org/media/ew/qc/archives/QC00full.pdf>
- Elliott, E. M., Isaacs, M. L., & Chugani, C. D. (2010). Promoting self-efficacy in early career teachers: A principal's guide for differentiated mentoring and supervision. *Florida Journal of Educational Administration & Policy*, 4(1), 131-146.
- Enochs, L. G., Scharmann, L. C., & Riggs, I. M. (1995). The relationship of pupil control to preservice elementary science teacher self-efficacy and outcome expectancy. *Science Education*, 79(1), 63-75.
- Evans, E. D., & Tribble, M. (1986). Perceived teaching problems, self-efficacy and commitment to teaching among preservice teachers. *Journal of Educational Research*, 80(2), 82-85.
- Evers, W. J., Brouwers, A., & Tomic, W. (2002). Burnout and self-efficacy: A study on teachers' beliefs when implementing an innovative educational system in the Netherlands. *British Journal of Educational Psychology*, 72(2), 227-243.
- Evertson, C. M. & Weinstein, C. S. (Eds.) (2006). *Handbook of classroom management. Research, practice, and contemporary issues*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Ewing, R., & Smith, D. (2003). Retaining quality: Beginning teachers in the profession. *English Teaching: Practice and Critique*. Retrieved from <https://education.waikato.ac.nz/research/files/etpc/2003v2n1art2.pdf>
- Farber, B. A. (1984). Teacher burnout: Assumptions, myths and issues. *Teachers College Record*, 86(9), 321-338.
- Feiman-Nemser, S. (1996). *Teacher mentoring: A critical review*. ERIC Digest. Washington, DC: ERIC Clearinghouse on Teaching and Teacher Education.
- Feiman-Nemser, S. (2001). From preparation to practice: Designing a continuum to strengthen and sustain teaching. *Teachers College Record*, 103, 1013-1055. doi:10.1111/0161-4681.00141
- Feiman-Nemser, S. (2003). What new teachers need to learn. *Educational Leadership* 60(8), 25-29.
- Feiman-Nemser, S., & Carver, C. L. (2012). Creating conditions for serious mentoring: Implication for induction policy. *Yearbook National Society of the Study of Education*, 111, 342-364.

- Feiman-Nemser, S., Schwille, S., Carver, C., & Yusko, B. (1999, July). A conceptual review of literature on new teacher induction. Retrieved from http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/16/cb/0f.pdf
- Ferguson, R. F. (1991, Summer). Paying for public education: New evidence on how and why money matters. *Harvard Journal on Legislation*, 28, 2, 465-498.
- Fetherston, T., & Lummis, G. (2012). Why Western Australian secondary teachers resign. *Australian Journal of Teacher Education*, 37(4). Retrieved from <http://ro.ecu.edu.au/ajte/vol37/iss4/>
- Fideler, L. F., & Haselkorn, D. (1999). *Learning the ropes: Urban teacher induction programs and practices in the United States*. Belmont, MA: Recruiting New Teachers, Inc.
- Fincham, J. E. (2008). Response rates and responsiveness for surveys, standards, and the Journal. *American Journal of Pharmacology Education*, 72, 43. Retrieved from <http://journals.plos.org/plosmedicine/article/file?id=10.1371/journal.pmed.1001069&type=printable>
- Finn, J. D. (1989). Withdrawing from school. *Review of Educational Research*, 59, 117-142.
- Finn, J. D. (1993). *School engagement and students at risk*. Washington, DC: National Center for Education Statistics.
- Fisher, M. H. (2011). Factors influencing stress, burnout, and retention of secondary teachers. *Current Issues in Education*, 14(1). Retrieved from <http://cie.asu.edu/>
- Fletcher, S. H., Strong, M. A., & Villar, A. (2005). An investigation of the effects of variations in mentor-based induction on the performance of students in California. Presentation at the meeting of the American Association of Colleges for Teacher Education, Washington, DC.
- Foss, S. K., & Waters, W. (2007). *Destination dissertation: A traveler's guide to a done dissertation*. Lanham, MD: Rowman & Litchfield.
- Fredericks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, 74, 59-109.
- Freiberg, H. J., & Lapointe, J. M. (2006). Research-based programs for preventing and solving discipline problems. In C. M. Evertson & C. S. Weinstein (Eds.), *Handbook of classroom management* (pp. 735-786). Mahwah, NJ: Lawrence Erlbaum.

- Fried, R. L. (2005). *The game of school: Why we all play it, how it hurts kids, and what it will take to change it*. San Francisco, CA: Jossey-Bass.
- Friedrichsen, P., Chval, K., & Teuscher, D. (2007). Strategies and sources of support for beginning teachers of science and mathematics. *School Science and Mathematics*, 107(5), 169-181.
- Friedman, I. A., & Farber, B. A. (1992). Professional self-concept as a predictor of teacher burnout. *The Journal of Educational Research*, 86(1), 28-35.
- Furlong, M. J., & Christenson, S. L. (2008). Engaging students at school and with learning: A relevant construct for *all* students. *Psychology Schools*, 45, 365-368. doi:10.1002/pits.20302
- Furlong, M. J., Whipple, A. D., St. Jean, G., Simental, J., Soliz, A., & Punthuna, S. (2003). Multiple contexts of school engagement: Moving toward a unifying framework for educational research and practice. *California School Psychologist*, 8, 99-114.
- Futrell, M. H. (2008). Changing the paradigm: preparing teacher educators and teachers for the twenty-first century. In M. Cochran-Smith, S. Feiman-Nemser, & D. J. McIntyre (Eds), *Handbook of research on teacher education* (3rd ed., pp. 534-539). New York, NY: Routledge.
- Garavalia, L., Hummel, J., Wiley, L., & Huitt, W. (1999). Constructing the course syllabus: Faculty and student perceptions of important syllabus components. *Journal of Excellence in College Teaching*, 10(1), 5-22. Retrieved from http://www.edpsycinteractive.org/papers/cons_course_syll.doc
- Gardner, H. (1993). *Multiple intelligences: The theory in practice*. New York, NY: Basic Books.
- Gibson, S., & Dembo, M. (1984). Teacher efficacy: A construct validation. *Journal of Educational Psychology*, 76, 569-582.
- Glass, G., & Smith, M. (1979). Meta-analysis of research on class size and achievement. *Educational Evaluation and Policy Analysis*, 1(1), 2-16.
- Glazerman, S., Isenberg, E., Dolfen, S., Bleeker, M., Johnson, A., Grider, M., & Jacobus, M. (2010). *Impacts of comprehensive teacher induction: Final results from a randomized controlled study* (NCEE 2010-4027). Washington, DC: U.S. Department of Education.
- Glickman, C., & Tamashiro, R. (1982). A comparison of first-year, fifth-year, and former teachers on efficacy, ego development, and problem solving. *Psychology in Schools*, 19, 558-562.

- Goddard, R. G., Hoy, W. K., & Woolfolk Hoy, A. (2004). Collective efficacy: Theoretical development, empirical evidence, and future directions. *Educational Researchers*, 33, 2-13.
- Goddard, R. D., Logerfo, L., & Hoy, W. K. (2004). High school accountability: The role of perceived collective efficacy. *Educational Policy*, 18(3), 403-425. doi:10.1177/0895904804265066
- Goldrick, L., Osta, D., Barlin, D., & Burn, J. (2012). *Review of state policies on teacher induction*. Retrieved from <http://www.newteachercenter.org/products-and-resources/policy-reports/review-state-policies-teacher-induction>
- Good, T. L., & Grouws, S. A. (1979). The Missouri mathematics effectiveness project: An experimental study in fourth-grade classrooms. *Journal of Educational Psychology*, 71, 355-362.
- Graham, S., Harris, K. R., Fink, B., & MacArthur, C. A. (2001). Teacher efficacy in writing: A construct validation with primary grade teachers. *Scientific Studies of Reading*, 5(2), 177-202.
- Graham, S., & Weiner, B. (1996). Theories and principles of motivation. In D. C. Berliner & R. Calfee (Eds.), *Handbook of educational psychology* (pp. 63-84). New York: Macmillan.
- Grant, L. W. (2006). Persistence and self-efficacy: A key to understanding teacher turnover. *The Delta Kappa Gamma Bulletin*, 72(2), 50-54. Retrieved from <http://search.ebscohost.com.www.consuls.org/login.aspx?direct=true&db=aph&AN=20357014&site=ehost-live>
- Gray, L., & Taie, S. (2015). *Public school teacher attrition and mobility in the first five years: Results from the first through fifth waves of the 2007–08 beginning teacher longitudinal study* (NCES 2015-337). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved January 30, 2016 from <http://nces.ed.gov/pubsearch>
- Guskey, T. R. (1988). Teacher efficacy, self-concept, and attitudes toward the implementation of instructional innovation. *Teaching and Teacher Education*, 4, 63-69.
- Guskey, T. R., & Passaro, P. D. (1994). Teacher efficacy: A study of construct dimensions. *American Educational Research Journal*, 31(3), 627-643. doi:10.2307/1163230
- Hamilton, M. B. (2003). *Online survey response rates and times: background and guidance for industry*. Tercent, Inc. Retrieved from https://facultyinnovate.utexas.edu/sites/default/files/response_rates.pdf

- Hansford, B. C., Ehrich, L. C., & Tennent, L. (2004). Formal mentoring programs in education and other professions: A review of the literature. *Educational Administration Quarterly*, 40(4), 518-540.
- Hanushek, E. A., Kain, J. F., O'Brien, D. M., & Rivkin, S. G. (2005). The market for teacher quality. NBER Working Paper 11154. National Bureau of Economic Research: Cambridge, MA. Retrieved from <http://www.nber.org/paper/w11154>
- Harris, D. N., & Sass, T. R. (2007). *Teacher training, teacher quality, and student achievement. Working paper 3*. National Center for Analysis of Longitudinal Data in Education Research. Washington, DC: The Urban Institute. Retrieved from <http://search.proquest.com/docview/742883820?accountid=15053>
- Henson, R. (2001). Teacher self-efficacy: Substantive implications and measurement dilemmas [Keynote address]. Retrieved from <http://www.uky.edu/~eushe2/Pajares/EREkeynote.PDF>
- Hirsch, E., Emerick, S., Church, K., & Fuller, E. (2006). *Teacher working conditions are student learning conditions: A Report on the 2006 North Carolina teacher working conditions survey*. Retrieved from <http://files.eric.ed.gov/fulltext/ED498770.pdf>
- Hoover-Dempsey, K. V. & Kendal, E. D. (1982). *Stress and coping among teachers: Experience in search of theory and science*. Nashville, TN: Vanderbilt University. (ERIC Document Reproduction Service No. ED 241503)
- Howe, E. R. (2006). Exemplary teacher induction: An international review. *Educational Philosophy and Theory*, 38, 287-297.
- Hunter, W. (2014). New teacher induction: Support, self-efficacy, and satisfaction. *Journal of Cross-Disciplinary Perspectives in Education*, 7(2), 41-51.
- Ingersoll, R. M. (2001). Teacher turnover and teacher shortages: An organizational analysis. *American Educational Research Journal*, 38, 499-534. doi:10.3102/00028312038003499
- Ingersoll, R. M. (2003). *Is there really a teacher shortage?* Center for the Study of Teaching and Policy, University of Washington.
- Ingersoll, R. (2004, November). Why do high-poverty schools have difficulty staffing their classrooms with qualified teachers? Retrieved from <http://www.americanprogress.org/kf/ingersoll-final.pdf>
- Ingersoll, R. M. (2012). Beginning teacher induction: What the data tell us. *Education Week*. Retrieved from http://www.edweek.org/ew/articles/2012/05/16/kappan_ingersoll.h31.html

- Ingersoll, M. R., & Kralik, L. M. (2004). *The impact of mentoring on teacher retention: What the research says*. Denver, CO: Education Commission of the States.
- Ingersoll, R., & Smith, T. M. (2004). Do teacher induction and mentoring matter? Retrieved from http://repository.upenn.edu/gse_pubs/134
- Ingersoll, R. M., & Strong, M. (2011). The impact of induction and mentoring programs for beginning teachers: A critical review of the research. *Review of Educational Research, 81*, 201-233.
- Jeck, D. C. (2010). *The relationship between levels of teacher efficacy and variability in instructional strategies* (Unpublished doctoral dissertation). Alexandria, VA: University of Virginia.
- Jimerson, S. R., Campos, E., & Greif, J. L. (2003). Toward an understanding of definitions and measures of school engagement and related terms. *California School Psychologist, 8*, 7-27.
- Johnson, S. M. (2004). *Finders and keepers: Helping new teachers survive and thrive in our schools*. San Francisco, CA: Jossey-Bass.
- Johnson, S. M., Berg, J. H., & Donaldson, M. L. (2005). *Who stays in teaching and why? A review of the literature on teacher retention*. Cambridge, MA: Harvard Graduate School of Education.
- Johnson, S. M., & Birkeland, S. E. (2003). Pursuing a “sense of success”: New teachers explain their career decisions. *American Educational Research Journal, 40*(3), 581-617. Retrieved from <http://search.proquest.com/docview/61932172?accountid=15053>
- Johnson, L. S., Golderick, L., & Lasagna, M. (2010). New teacher excellence: The impact of state policy on teacher induction program implementation (policy brief 11-23). Retrieved from <http://www.newteachercenter.org/products-and-resources/new-teacher-excellence-impact-state-policy-induction-program-implementation>
- Johnson, S., & Kardos, S. M. (2008). The next generation of teachers: Who enters, who stays, and why. In M. Cochran Smith S. Feiman-Nemser, & D. J. McIntyre (Eds.), *Handbook of research on teacher education* (3rd ed., pp. 540-545). New York, NY: Routledge.
- Kapadia, K., Coca, V., & Easton, J. (2007). *Keeping new teachers: A first look at the influences of induction in the Chicago public schools*. Chicago, IL: Chicago Consortium for School Research.

- Kaur, S. (2011). Comparative study of occupational stress among teachers of private and govt. schools in relation to their age, gender and teaching experience. *International Journal of Educational Planning & Administration*, 1(2), 151-160.
- Klassen, R. M., Bong, M., Usher, E. L., Chong, W. H., Huan, V. S., Wong, I. Y. F., & Georgiou, T. (2009). Exploring the validity of teachers' self-efficacy scale in five countries. *Contemporary Educational Psychology*, 34, 67-76.
doi:10.1016/j.cedpsych.2008.08.001
- Klem, A. M., & Connell, J. P. (2004). Relationships matter: Linking teacher support to student engagement and achievement. *Journal of School Health*, 74, 262-273.
doi:10.1111/j.1746-1561.2004.tb08283.x
- Knapp, M. S., Elfers, A. M., Plecki, M. L., Loeb, H., Boatright, B., & Cabot, N. (2004, August). *Preparing for reform, supporting teachers' work: Surveys of Washington state teachers, 2003-04 school year*. Seattle, WA: University of Washington.
- Korthagen, F. (2004). In search of the essence of a good teacher. Towards a more holistic approach in teacher education. *Teaching and Teacher Education*, 20, 77-97.
- Ladd, H. (2008). *Value-added modeling of teacher credentials: Policy implications*. Paper presented at the second annual CALDER research conference, "The Ins and Outs of Value-Added Measures in Education: What Research Says," Washington, D.C., November 21. Retrieved from http://www.caldercenter.org/upload/Sunny_Ladd_presentation.pdf
- Le Cornu, R., & Ewing, R. (2008, Oct.). Teaching and teacher education. *An International Journal of Research and Studies*, 24(7), 1799-1812.
- Lee, V. E., Smith, J. B. (1999). Social support and achievement for young adolescents in Chicago: The role of school academic press. *American Educational Research Journal*, 36(4), 907-945.
- Lesnick, J., Jiang, J., Sporte, S. E., Sartain, L., & Hart, H. (2010, November). *A study of Chicago New Teacher Center induction coaching in Chicago Public Schools: 2009-2012*. Chicago, IL: University of Chicago, Consortium on Chicago School Research.
- Lewis, R., Romi, S., Katz, Y. J., & Qui, X. (2005). Students' reaction to classroom discipline in Australia, Israel, and China. *Teacher and Teacher Education*, 24, 715-724. doi:10.1016/j.tate.2007.05.003
- Liston, D., Borko, H., & Whitcomb, J. (2008). The teacher educator's role in enhancing teacher quality. *Journal of Teacher Education*, 59(2), 111-116.
doi:10.1177/0022487108215581

- Lonsdale, M., & Ingvarson, L. (2003). *Initiatives to address teacher shortage*. Policy Brief, Issue 5, Melbourne: Australian Council for Educational Research.
- Lopez, A., Lash, A., Schaffner, M., Shields, P., & Wagner, M. (2004). *Review of research on the impact of beginning teacher induction on teacher quality and retention, ED Contract ED- 01-CO-0059/0004*. Menlo Park, CA: SRI International.
- Lowrey, J. (2012). *Teaching induction: A study of the effectiveness of induction programs among urban high school teacher self-efficacy* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (Accession Order No. 3517170)
- Maciejewski, J. (2007). Supporting new teachers: Are induction programs worth the cost? *District Administration*, 43(9), 48-52.
- Mader, J. (2016). How can states better support and keep new teachers? Retrieved from <http://hechingerreport.org/how-can-states-better-support-and-keep-new-teachers/>
- Marks, H. M. (2000). Student engagement in instructional activity: Patterns in the elementary, middle, and high school years. *American Educational Research Journal*, 37(1), 153-184.
- Martin, N. K., & Sass, D. A. (2010). Construct validation of the behavior and instructional management scale. *Teaching and Teacher Education*, 26(5), 1124-1135.
- Marzano, R. J. (1998). *A theory-based meta-analysis of research on instruction*. Aurora, CO: Mid-continent Regional Educational Laboratory. Retrieved from http://www.mcrel.org/pdf/instruction/5982rr_instructionmeta_analysis.pdf
- Marzano, R. J., Gaddy, B. B., & Dean, C. (2000). *What works in classroom instruction*. Aurora, CO: Mid-continent Regional Educational Laboratory. Retrieved from http://www.mcrel.org/PDF/Instruction/5992TG_What_Works.pdf
- Marzano, R. J., Pickering, D., & Pollock, J. E. (2001). *Classroom instruction that works: Research-based strategies for increasing student achievement*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Matus, D. E. (1999). An innovative strategy supports student teachers in urban secondary schools. *The Clearing House*, 73(1), 37-41.
- McCarthy, C. J., Lambert, R. G., O'Donnell, M., & Melendres, L. T. (2009). The relation of elementary teachers' experience, stress, and coping resources to burnout symptoms. *Elementary School Journal*, 109(3), 282-300.

- McDermott, P. A., Mordell, M., Stolzhus, J. C. (2001). The organization of student performance in American schools: discipline, motivation, verbal learning, and nonverbal learning. *Journal of Educational Psychology*, 93(1), 65-76.
- McDonald, F., & Elias, P. (1976). *Beginning teacher evaluation study. Phase II. 1973-74*. Princeton, NJ: Educational Testing Service.
- McDonnough, J. T., & Matkins, J. J. (2010). The role of field experience in elementary preservice teachers' self-efficacy and ability to connect research to practice. *School Science and Mathematics*, 110(1), 13-23.
- McPartland, J. M. (1994). Dropout prevention in theory and practice. In R. Rossi (Ed.), *Schools and students at risk: Context and framework for positive change* (pp. 255-276). New York: Teachers College Press.
- Meijer, C., & Foster, S. (1988). The effect of teacher self-efficacy on referral chance. *Journal of Special Education*, 22, 378-385.
- Miller, L. C. (2012). Situating the rural teacher labor market in the broader context: A descriptive analysis of the market dynamics in New York State. *Journal of Research in Rural Education*, 27(13), 1-31. Retrieved from <http://jrre.psu.edu/articles/27-13.pdf>
- Mitchell, R. C., & Carson, R. T. (1989). *Using surveys to value public goods: The contingent valuation method*. Washington, D.C: Resources for the Future.
- Mongillo, M. (2011). *Exploring the development of novice teachers' self-efficacy* (Doctoral dissertation). Retrieved from ProQuest Dissertations and Theses. (Accession Order No. ED534149)
- Moore, W., & Esselman, M. (1992, April). *Teacher efficacy, power, school climate and achievement: A desegregating district's experience*. Paper presented at the annual meeting of the American Educational Research Association, San Francisco.
- National Center for Education Statistics. (1997, July). *A statistical analysis report: Job satisfaction among America's teachers: Effects of workplace conditions, background characteristics, and teacher compensation*. Washington, DC: U.S. Department of Education Office of Educational Research and Improvement.
- National Center for Education Statistics. (2004). Schools and staffing survey. Retrieved December 1, 2015, from http://nces.ed.gov/surveys/sass/tables/state_2004_35.asp
- National Commission on Teaching and America's Future (NCTAF). (1996). *What matters most: Teaching for America's future*. Washington, DC: Author.

- National Commission on Teaching and America's Future (NCTAF). (2007). *Policy brief: The high cost of teacher turnover*. Washington, DC: Author.
- National Research Council and Institute of Medicine. (2004). *Engaging schools: Fostering high school students' motivation to learn*. Washington, DC: The National Academies Press.
- New Teacher Center (NTC). (2013). *Final report: Increasing the effectiveness of educator induction programs in Colorado*. Retrieved from https://newteachercenter.org/wp-content/uploads/ntc_co_induction_report-201305.pdf
- No Child Left Behind Act, 20 U.S.C § 6301 (2001).
- North Carolina Department of Public Instruction. (2015). *2014-2015 state of the teaching profession in North Carolina*. [Data File]. Retrieved from <http://www.ncpublicschools.org/docs/educatoreffectiveness/surveys/leaving/2014-15turnoverreport.pdf>
- North Carolina Fast Facts. [online pdf]. (2011, March). Retrieved from <http://legislative.ncpublicschools.gov/20110318-fastfacts.pdf>
- North Carolina Mentoring Continuum. [online Word]. (2013, Nov.). Retrieved from <http://ccsnc.org/wp-content/uploads/2013/11/NCMentoringContinuumWord.pdf>
- North Carolina State Board of Education Policy Manual. (2016). *Policy title: Beginning teacher support program*. Retrieved from <http://ilcc.ncdpi.wikispaces.net/file/view/State%20Board%20of%20Education-%208-31-16.pdf/592996870/State%20Board%20of%20Education-%208-31-16.pdf>
- North Carolina Teacher Working Conditions Survey. (2016). Retrieved from <https://ncteachingconditions.org/results>
- O'Brien, P., Goddard, R., & Keeffe, M. (2008). Burnout confirmed as a viable explanation for beginning teacher attrition. In: AARE 2007: *Australian Association for Research in Education Annual Conference 2007: Research Impacts: Proving or Improving?* November 2007, Fremantle, Western Australia.
- OECD. (2005). Teachers matter: Attracting, developing and retaining effective teachers. *Education and Skills*, 2005(6), 1-240. Retrieved from <http://titania.sourceoecd.org/vl=7798822/cl=14/nw=1/rpsv/ij/oecdthemes/99980029/v 2005n6/s1/p11>

- O'Neill, S. C., & Stephenson, J. (2011). The measurement of classroom management self-efficacy: A review of measurement instrument development and influences. *Educational Psychology, 31*(3), 261-299. doi:10.1080/01443410.2010.545344
- Palmer, D. (2011). Sources of efficacy information in an in-service program for elementary teachers. *Science Education, 95*, 577-600.
- Pendergast, D., Garvis, S., & Keogh, J. (2011). Pre-service student-teacher self-efficacy beliefs: An insight into the making of teachers. *Australian Journal of Teacher Education, 36*(12). Retrieved from <http://dx.doi.org/10.14221/ajte.2011v36n12.6>
- Perrachione, B. A., Rosser, V. J., & Petersen, G. J. (2008). Why do they stay? Elementary teachers' perceptions of job satisfaction and retention. *The Professional Educator, 32*(2), 25-41. Retrieved from http://www.theprofessionaleducator.org/articles/perrachione_final.pdf
- Plunkett, M., & Dyson, M. (2011). Becoming a teacher and staying one: Examining the complex ecologies associated with educating and retaining new teachers in rural Australia? *Australian Journal of Teacher Education, 36*(1), Article 3.
- Potemski, A., & Matlach, L. (2014). *Supporting new teachers: What do we know about effective state induction policies?* Center on Great Teachers and Leaders. American Institutes for Research. Retrieved from http://www.gtlcenter.org/sites/default/files/Induction_Snapshot.pdf>
- Public Education Network. (2003). *The voice of the new teacher*. Washington, DC: Public Education Network.
- Ramsey, G. (2000). *Quality matters: Revitalising teaching*. Sydney: NSW Department of Education and Training. Retrieved from <https://www.det.nsw.edu.au/teachrev/reports/reports.pdf>
- Reeder, H. S. (2013). *Teacher induction programs in North Carolina: Factors relating to job satisfaction and the intent to remain in the profession*. Electronic Theses and Dissertations. Paper 1144. Retrieved from <http://dc.etsu.edu/etd/1144>
- Reinhardt, A. (2011). *Fifth year teacher perceptions of induction programs upon teacher retention*. Electronic Theses and Dissertations. Retrieved from <http://scholarscompass.vcu.edu/cgi/viewcontent.cgi?article=3387&context=etd>
- Rice, J. (2010). *The impact of teacher experience examining the evidence and policy implications* (Brief No. 11). Washington, DC: Urban Institute.
- Rich, Y., Lev, S., & Fisher, S. (1996). Extending the concept and assessment of teacher efficacy. *Educational and Psychological Measurement, 56*, 1015-1025.

- Ross, J., & Bruce, C. (2007). Professional development effects on teacher efficacy: Results of randomized field trial. *Journal of Educational Research*, 101, 50-60. doi:10.3200/JOER.101.1.50-60
- Rothchild, B., Morris, K., & Brassard, M. (2006). Teachers' conflict management styles: The role of attachment styles and classroom management efficacy. *Journal of School Psychology*, 44, 105-121.
- Rothstein, R. (2004). Wising up on the black-white achievement gap. *The Education Digest*, 70(4), 27-36. Retrieved from <http://eddigest.com/html/contentsmain.html>
- Rubie-Davies, C. M. (2008). Teacher expectations. In T. Good (ed.), *21st century education: A reference handbook* (pp. 254-262). Thousand Oaks, CA: Sage.
- Rubie-Davies, C. M., Flint, A., & McDonald, L. G. (2012). Teacher beliefs, teacher characteristics, and school contextual factors: What are the relationships? *British Journal of Educational Psychology*, 82(2), 270-288.
- Rummel, R. J. (1970). *Applied factor analysis*. Evanston, IL: Northwestern University Press.
- Runyan, C. K. (1991, November). *Empowering beginning teachers through developmental induction*. Paper presented at the Annual Conference of the National Council of States on In-service Education, Houston, TX.
- Sass, T. (2007, Oct. 4). *The determinants of student achievement: Different estimates for different measures*. Paper presented at the first annual CALDER research conference, Washington, DC.
- Shoulders, T. L., & Krei, M. S. (2015). Rural high school teachers' self-efficacy in student engagement, instructional strategies, and classroom management. *American Secondary Education*, 44(1), 50. Retrieved from https://www.researchgate.net/publication/274685843_Determining_Factors_Affecting_Teachers'_Self-Efficacy_at_Secondary_School_Level
- Sinclair, M. F., Christenson, S. L., Lehr, C. A., & Anderson, A. R. (2003). Facilitating student engagement: Lessons learned from Check & Connect longitudinal studies. *California School Psychologist*, 8, 29-42.
- Skilbeck, M., & Connell, H. (2003). *Attracting, developing and retaining effective teachers: Australian country background report*. Canberra: Commonwealth Government of Australia.

- Skilbeck, M., & Connell, H. (2004). *Teachers for the future: The changing nature of society and related issues for the teaching workforce*. A report to the Teacher Quality and Educational Leadership Taskforce of MCEETYA. Retrieved from http://www.mceecdya.edu.au/verve/_resources/teachersforthefuture_file.pdf
- Smelser, N. J., Wilson, W. J., & Mitchell, F. (2001). Introduction. In N. J. Smelser, W. J. Wilson, & F. Mitchell (Eds.) *America becoming: Racial trends and their consequences, Volume I* (1-19). Washington, DC: National Academy Press.
- Smith, H. (1995). *Rethinking America: A New Game Plan from the American Innovators*. New York, NY: Random House.
- Smith, T. M., & Ingersoll, R. M. (2004). What are the effects of induction and mentoring on beginning teacher turnover? *American Educational Research Journal*, 41, 681-714.
- Stansbury, K., & Zimmerman, J. (2000). *Lifelines to the classroom: Designing support for beginning teachers*. San Francisco, CA: West Ed.
- Stanulis, R. N., & Floden, R. E. (2009). Intensive mentoring as a way to help beginning teachers develop balanced instruction. *Journal of Teacher Education*, 60, 112-122.
- Stein, M. K., & Wang, M. C. (1988). Teacher development and school improvement: The process of teacher change. *Teaching and Teacher Education*, 4, 171-187.
- Stronge, J. H., Ward, T. J., & Grant, L. W. (2011). What makes good teachers good? A cross-case analysis of the connection between teacher effectiveness and student achievement. *Journal of Teacher Education*, 62(4), 339-355. Retrieved from <http://dx.doi.org/10.1177/0022487111404241>
- Swearingen, M. (2009). *Teacher-efficacy and cultural receptivity as predictors of burnout in novice urban teachers after one year of teaching*. (Doctoral dissertation). ProQuest Dissertations and Theses database. (UMI No. 3374044)
- Taylor, L., & Parsons, J. (2011). Improving student engagement. *Current Issues in Education*, 14(1), 1-33.
- Thompson, M., Paek, P., Goe, L., & Ponte, E. (2005, April 15). *The impact of new teacher induction on teacher practices and student learning*. Paper presented at the Annual Meeting of the American Educational Research Association. Montreal, CA. Retrieved from https://www.ets.org/Media/Resources_For/K-12_Education/pdf/AERA_2005_Thompson.pdf
- Tschannen-Moran, M. & Hoy, A. W. (2001). Teacher self-efficacy: Capturing an elusive construct. *Teaching and Teacher Education*, 17, 783-805. doi:10.1016/S0742-051X(01)00036-1

- Tschannen-Moran, M., & Hoy, A. W. (2007). Teacher-efficacy: Capturing an elusive construct. *Teaching and Teacher Education*, 23, 944-956. doi:10.1016/j.tate.2006.05.003
- Tschannen-Moran, M., Hoy, A., & Hoy, W. (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research*, 68, 202-248.
- Tschannen-Moran, M., & McMaster, P. (2009). Sources of self-efficacy: Four professional development formats and their relationship to self-efficacy and implementation of a new teaching strategy. *The Elementary School Journal*, 110(2), 228-245.
- United States Department of Education. (2006). *The secretary's fifth annual report on teacher quality: A highly qualified teacher in every classroom*. Washington, DC: U.S. Government Printing Office. Retrieved from <http://www.ed.gov/about/reports/annual/teachprep/2006-title2report.pdf>
- Upokodu, O. N. (2007). Preparing socially conscious teachers: A social justice oriented teacher education. *Multicultural Education*, 15(1), 8-15.
- Veenman, S. (1984). Perceived problems of beginning teachers. *Review of Educational Research*, 54, 143-178.
- Villar, A. (2004). *Measuring the benefits and costs of mentor- based induction: A value-added assessment of new teacher effectiveness linked to student achievement*. Santa Cruz, CA: New Teacher Center.
- Voelkl, K. E (1995). School warmth, student participation and achievement. *Journal of Experimental Education*, 63, 127-138.
- Von Seeker, C., & Lissitz, R. (1999). Estimating the impact of instructional practices on student achievement in science. *Journal of Research in Science Teaching*, 28(8) 705-711.
- Walters, H. (2004). Why teachers leave the profession. *Delta Kappa Gamma Bulletin*, 71(1), 58-60.
- Wang, M. C., Haertel, G. D., & Walberg, H. J. (1993). Toward a knowledge base for school learning. *Review of Educational Research*, 63(3), 249-294.
- Wechsler, M. E., Caspary, K., Humphrey, D. C., & Matsko, K. K. (2012) Examining the effects of new teacher induction. *Yearbook of the National Society for the Study of Education*, 111(2), 387-416. Retrieved from <http://search.proquest.com/docview/1312425724?accountid=15053>

- Wei, R. C., Darling-Hammond, L., Andree, A., Richardson, N., & Orphanos, S. (2009). *Professional learning in the learning profession: A status report on teacher development in the United States and abroad*. Dallas, TX: National Staff Development Council.
- Wentzel, K. R. (1998). Social relationships and motivation in middle school: The role of parents, teachers, and peers. *Journal of Educational Psychology*, 90, 202-209.
- Whisnant, E., Elliott, K., & Pynchon, S. (2005, July). A review of literature on beginning teacher induction. *Center for Strengthening the Teaching Profession*. Retrieved on March 15, 2016, from http://cstp-wa.org/Navigational/Policies_practices/Teacher_induction/A_Review_of_Literature.pdf
- Wong, H. (2001, August 8). *Mentoring can't do it all*. Retrieved December 7, 2008, from <http://www.newteacher.com/ppapers/mcdia.html>
- Wong, H. (2003). Collaborating with colleagues to improve student learning. *ENC Focus*, 11(16), 9.
- Wong, H. (2004). Induction programs that keep new teachers teaching and improving. *NASSP Bulletin*, 88(638), 41-58.
- Wong, H., Britton, T., & Ganser, T. (2005). What the world can teach us about new teacher induction. *KAPPAN*, 86(5), in press.
- Wood, A. I. (2001). What does research say about teacher induction programs and IHE/LEA collaborative programs? *Issues in Teacher Education*, 10, 69-81.
- Wood, A. L., & Stanulis, R. N. (2009). Quality teacher induction: "Fourth-wave" (1997-2006) induction programs. *The New Educator*, 5, 1-23.
- Woolfolk, A. E., & Hoy, W. K. (1990). Prospective teachers' sense of efficacy and beliefs about control. *Journal of Educational Psychology*, 82, 81-91.
- Woolfolk, A. E., Rosoff, B., & Hoy, W. K. (1990). Teachers' sense of efficacy and their beliefs about managing students. *Teaching and Teacher Education*, 6, 137-148.
- Woolfolk Hoy, A., & Burke-Spero, R. (2005). Changes in teacher efficacy during the early years of teaching: A comparison of four measures. *Teaching and Teacher Education*, 21, 343-356.
- Yazzie-Mintz, E. (2007). *Voices of students on engagement: A report on the 2006 high school survey of student engagement*. Bloomington, IN: Center for Evaluation & Education Policy, Indiana University. Retrieved January 18, 2008, from [http://ceep.indiana.edu/hssse/pdf/HSSSE 2006 Report.pdf](http://ceep.indiana.edu/hssse/pdf/HSSSE%2006%20Report.pdf)

- Yong, A., & Pearce, S. (2013). A beginner's guide to factor analysis: Focusing on exploratory factor analysis. *Tutorials in Quantitative Methods for Psychology*, 9(2), 79-94.
- Yopp, R. H., & Young, B. L. (1999). A model for beginning teacher support and assessment. *Action in Teacher Education*, 21(1), 24-36.
- Yu, X., Wang, P., Zhai, X., Dai, H., & Yang, Q. (2014). The effect of work stress on job burnout among teachers: The mediating role of self-efficacy. *Social Indicators Research*, 122, 701-708.

Appendix A
TSES Google Form

Teacher Sense of Efficacy Survey

All information collected in this survey will remain confidential and anonymous. There are no identifying markers to link your responses to your identity. Please answer honestly so that we can better support beginning teachers.

Demographics

How many years have you worked in your county?*

Required

- less than a year in my current county
- 1 year in my current county
- 2 years in my current county
- 3 years in my current county
- this is my 4th year

Does your school district consider you as having successfully completed 3 full years of the beginning teacher induction program?*

Required

- yes
- no

Please indicate the grade level category in which you currently work.*

Required

- elementary
- middle school
- high school

Do you currently teach at a Title I school?*

Required

- yes
- no

What is your age?*

Required

- 20-26 years old
- 27-33 years old
- 34-40 years old
- 40-46 years old
- 47-53 years old
- 54 or older

Please indicate your race.*

Required

- African American
- Caucasian
- Hispanic (non-white)
- Other

Teachers' Sense of Efficacy Survey

Directions: This questionnaire is designed to help us gain a better understanding of the kinds of things that create difficulties for teachers in their school activities. Please indicate your opinion about each of the statements below. Your answers are confidential.

Please indicate how capable you feel in the given situations below. The scale ranges from “nothing” (1) to “a great deal” (9).

How much can you do to get through to the most difficult students? *

Required

1	2	3	4	5	6	7	8	9
nothing				a great deal				

How much can you do to help your students think critically? *

Required

1	2	3	4	5	6	7	8	9
nothing				a great deal				

How much can you do to control disruptive behavior in the classroom? *

Required

1	2	3	4	5	6	7	8	9
nothing				a great deal				

How much can you do to motivate students who show low interest in school work? *

Required

1	2	3	4	5	6	7	8	9
nothing				a great deal				

To what extent can you make your expectations clear about student behavior? *

Required

1	2	3	4	5	6	7	8	9
nothing				a great deal				

How much can you do to get students to believe they can do well in school work? *

Required

1	2	3	4	5	6	7	8	9
nothing				a great deal				

How well can you respond to difficult questions from your students? *

Required

1	2	3	4	5	6	7	8	9
nothing				a great deal				

How well can you establish routines to keep activities running smoothly? *

Required

1	2	3	4	5	6	7	8	9
nothing				a great deal				

How much can you do to help your students value learning? *

Required

1 2 3 4 5 6 7 8 9
 nothing a great deal

How much can you gauge student comprehension of what you have taught?*
Required

1 2 3 4 5 6 7 8 9
 nothing a great deal

To what extent can you craft good questions for your students?*
Required

1 2 3 4 5 6 7 8 9
 nothing a great deal

How much can you do to foster student creativity?*
Required

1 2 3 4 5 6 7 8 9
 nothing a great deal

How much can you do to get children to follow classroom rules?*
Required

1 2 3 4 5 6 7 8 9
 nothing a great deal

How much can you do to improve the understanding of a student who is failing?*
Required

1 2 3 4 5 6 7 8 9
 nothing a great deal

How much can you do to improve the understanding of a student who is failing?*
Required

1 2 3 4 5 6 7 8 9
 nothing a great deal

How much can you do to calm a student who is disruptive or noisy?*
Required

1 2 3 4 5 6 7 8 9
 nothing a great deal

How well can you establish a classroom management system with each group of students?*
Required

1 2 3 4 5 6 7 8 9
 nothing a great deal

How much can you do to adjust your lessons to the proper level for individual students?*
Required

1 2 3 4 5 6 7 8 9
 nothing a great deal

How much can you use a variety of assessment strategies?*

Required

1	2	3	4	5	6	7	8	9
nothing					a great deal			

How well can you keep a few problem students from ruining an entire lesson?***Required**

1	2	3	4	5	6	7	8	9
Nothing					a great deal			

To what extent can you provide an alternative explanation or example when students are confused?***Required**

1	2	3	4	5	6	7	8	9
Nothing					a great deal			

How well can you respond to defiant students?***Required**

1	2	3	4	5	6	7	8	9
Nothing					a great deal			

How much can you assist families in helping their children do well in school?***Required**

1	2	3	4	5	6	7	8	9
Nothing					a great deal			

How well can you implement alternative strategies in your classroom?***Required**

1	2	3	4	5	6	7	8	9
Nothing					a great deal			

How well can you provide appropriate challenges for very capable students?***Required**

1	2	3	4	5	6	7	8	9
Nothing					a great deal			

Confirmation Page

Your response has been recorded.

Focus Group:

Please consider participation in a single session focus group (30-45 minutes) please click on the link below. This is a separate link so no identifying information will transfer from your survey to the focus group participation form. All information in the previous survey questions will remain confidential and anonymous. Participation in the focus group discussion will allow for richer context for the overall picture of teacher efficacy in both counties. It is important to understand how experiences led to teachers' collective responses so that beginning teacher support may be improved.

<http://goo.gl/forms/xkNJ9nKxqj>

Appendix B
Focus Group Google Form

Focus Group Participation

Please understand that your privacy and anonymity is protected. This is a separate Google form so no identifying information is linked from your survey to this form. All information in the Teachers' Sense of Efficacy Survey will remain confidential and anonymous. Participation in the focus group discussion allows for richer context to develop a more complete picture of the induction program. Understanding beginning teachers' perceptions and experiences while in the program is crucial to strengthening new teacher support. Thank you for your willingness to participate!

Your name*

[Short answer text]

Would you prefer an online group discussion or face to face discussion? *

Online

Face-to-face

(I will be in touch soon to communicate the date/time of the focus group meeting.)

What is your email address?*

[Short answer text]

What is your telephone number?*

[Short answer text]

*Required

Appendix C

Program Coordinator Interview Protocol

Induction Program Coordinator Interview Protocol

Hi. My name is Julie Stanley. Thank you for taking the time to talk with me.

I am conducting a study of the impact the district's beginning teacher induction program has on the development of teacher self-efficacy in novice teachers. Specifically, I am examining fourth-year teachers' perceptions of self-efficacy in the areas of instructional strategies, student engagement, and classroom management. I'd like to use this time to learn more about the various elements and experiences that shape your program.

This interview should take about 30 minutes. The purpose of this interview is to help me gain deeper insight into the support services offered to new teachers in the district. As we talk, I am going to take notes, but I'd like to digitally record this interview to ensure accuracy of my notes. At your request, I will stop recording. Do I have your permission to record our interview? [Wait for affirmative verbal response.]

Program Plan

- 1) How was the content of the program determined?
- 2) How is the program implemented?
 - Frequency of meetings?
 - Duration of meetings?
- 3) How do you specifically seek to develop new teachers' instructional skills?
 - How do you know if the program has been successful in developing instructional skills?
- 4) How do you specifically seek to develop new teachers' ability to engage students in learning?
 - How do you know if the program has been successful in developing teachers' ability to engage students?
- 5) How do you specifically seek to develop new teachers' command of classroom management?
 - How do you know if the program has been successful in developing management skills?
- 6) Please describe the process for selecting, training, and use of mentors in the program.

- How does the program recruit mentors?
- What are the selection criteria used by the program?
- When are BT-mentor assignments made? Prior to school year?
- If a “bad match” is made, what is the protocol for the teacher or mentor to follow, if any?
- Are mentors compensated?
- Describe the foundational training provided to mentors and any on-going training, if applicable.

7) How is the induction program assessed or evaluated?

- Measureable objectives identified?
- Multiple data sources – implementation and impact?
- Used to inform program improvement? (Formative)
- Frequency: Annually? Every five years?

Summary

8) What are the criteria for BTs’ exit out of the beginning teacher induction program?

9) What would you identify as the greatest strength(s)/weakness(es) of the program?

10) In your opinion, what are the key skills you hope to develop in all new teachers?

11) In light of research and best practices, how do you know that the induction program provides quality support to beginning educators?

- What, if anything, would you like to improve about the program?

Thank you very much for your time and helping me develop a complete picture of the induction program. If I need to clarify any of this information, may I contact you for a follow up consult? [Await verbal response]

Thank you, again. Good-bye.

Appendix D
Focus Group Protocol

Focus Group Protocol

Due to the nature of explanatory sequential mixed methods design, the researcher will ask probing questions when further elaboration by the participants is necessary. Spontaneous open-ended questions may be asked based upon participant responses. These questions are not conclusive because data analyses from the quantitative instrument have yet to be conducted. As statistically significant data and trends develop from the descriptive statistics, additional questions may be added.

As participants arrive, they will sign the sign-in sheet to record attendance and informed consent for participation in the focus group.

Introduction script:

You have participated in the study about the impact of beginning teacher induction support programs. In an effort to gain a richer understanding of the impact of various elements of the programs, I would like to ask you to respond to a series of questions. I am also interested in understanding the elements of the program that were most helpful to you and elements that you feel were needed but lacking or nonexistent. This interview should take about 30-45 minutes. All responses will remain confidential. No individual participant will be identified in the analysis of this interview. I will record the audio of this session to guarantee accuracy as I transcribe your responses. You will be given a transcript of your responses and if there are statements that I have inaccurately recorded or information you feel uncomfortable sharing, I will remove them from the research study. To get us started today, please go around and tell me your name.

Script:

During this interview you will respond to open ended questions, some of which are based upon the results of the Teacher Sense of Self-Efficacy instrument. Please provide as much detail in your responses as possible.

1. How did the induction program aid in your development of instructional strategies that address student needs? (If it didn't...how might the program change to better support future new teachers?)
2. Please describe how the induction program experiences impacted your ability to maintain student engagement throughout a lesson? (If it didn't...how might the program

improve to support future new teachers?)

3. In what ways did the induction program assist you in developing effective classroom management strategies? (If it didn't...how might the program change to better support future new teachers?)

4. How would you describe the mentoring program? (Was it helpful? Why or why not?)

5. Was your assigned mentor a good match for you? (Was your mentor from your content area?)

6. If it wasn't a good match, what actions were taken to address this and by whom?

7. What do you perceive to be the most valuable elements of your experiences in the induction program?

(Why?)

8. Please describe any teacher needs you feel are not adequately addressed by the induction program.

9. If you could make a suggestion to improve the beginning teacher induction program, what would it be?

10. Is there anything else you'd like to share?

Additional questions may be added to explore quantitative data trends after TSES responses have been analyzed

As a conclusion, the researcher will thank the participants for their time in order to give an insightful perspective of the induction programs.

Thank you for your participation. Your contribution will serve to improve support services for beginning teachers in the district.

Appendix E

Electronic Invitation to Participate

Invitation to Participate in the Research Study

Dear Colleague,

I am a teacher in “X” County Schools and a doctoral candidate at Gardner-Webb University. I am conducting a research study to evaluate teachers’ perceived self-efficacy after completion of the beginning teacher induction program. As a full-time teacher, I understand the demands placed upon you at this point in the school year. For that reason, this study is designed to require a minimal investment of your time and energy. I sincerely appreciate your consideration to participate. Your input is valuable and will shape the support available to new teachers.

The title of this study is: An Examination of the Impact of Induction on Teacher Self-Efficacy. Teacher self-efficacy is the degree to which teachers feel prepared to effectively impact student learning. The Teacher Sense of Self-Efficacy (TSES) instrument will evaluate how confident teachers feel in their ability to use effective instructional strategies, engage students in active learning, and manage student behavior in the classroom. Your contribution to this research will help strengthen beginning teacher support in our district.

I would appreciate your help in evaluating the impact of the STAY program. I have created a Google form link to the self-efficacy instrument. There will be six basic demographic questions for the purpose of statistical analyses (no identifying information will be collected), followed by a 24-question survey. You will be asked to rate your self-efficacy along a 9 point Likert scale for questions that align with the three measured constructs: instruction, student engagement, and classroom management. All responses will remain anonymous. The survey will require approximately 20 minutes to complete.

Upon submission of survey responses, you will view an exit screen with a new Google doc link. Please consider participating in a single session focus group discussion about your induction experiences. This discussion should take approximately 30 minutes and will be in early-mid April. This separate link collects your name, telephone number, and email address in order to notify you of the date, time, and location of the focus group.

I am committed to making this as convenient for teachers as possible. This separate link protects your confidentiality by ensuring that all contact information remains unlinked to survey responses. The discussion will be digitally recorded and transcribed, however pseudonyms will be used to further protect all participants' anonymity. A copy of your transcribed statements will be provided for your review. If you feel any statement is inaccurate, I will remove it. After transcription, the digital audio recording will be deleted.

Participation in this research study is completely voluntary and participants may withdraw from the study at any time without negative consequences. If you have any questions or concerns, please contact me directly at 555-555-5555 or xxxxxxxx@gardner-webb.edu.

If you would be willing to provide the professional courtesy of participation, please see the attached letter of consent. There are two ways to submit your informed consent.

1. You may download, sign, and email the attached consent form to me.
2. You may click on link below and provide an electronic signature.

This informed consent form is available at: <http://goo.gl/forms/Vlj58k5pDU>

Upon submission of your electronic signature of consent, you will see the survey link. At the end of the TSES survey, you will have the option to participate in a brief focus group. If you prefer to email me your consent form, I will follow up with the survey link.

Thank you in advance for your willingness to contribute to the education profession. Your participation has the potential to impact new teacher support for beginning teachers in our district and across North Carolina.

Sincerely,

Julie Stanley

Appendix F

Letter of Informed Consent

Informed Consent Form Ed.D Dissertation Research

Please complete this form after you have read the accompanying informative email.

Project Title: An Examination of the Impact of Induction on Teacher Self-Efficacy

Researcher: Julie Stanley

Thank you for your interest in this research. If you have any questions after reading the emailed description and explanation of the research study, please ask the researcher before you to decide whether to join. A copy of this consent form is attached to your original email so that you may refer to it at any time.

Participant's Statement

I agree that:

- I have read the notes written above and the explanatory email and understand what the study involves. and understand what the study involves.
- I understand that if I decide at any time that I no longer wish to take part in this project, I can notify the researchers involved and withdraw immediately.
- I agree that the research project named above has been explained to me to my satisfaction and I agree to take part in this study.

***Signature:**

Date:

Email:

Appendix G
Consent Google Form

Informed Consent Form Ed.D Dissertation Research

Please complete this form after you have read the Information Sheet attached to the original email.

*** Required**

Project Title: An Examination of the Impact of Induction on Teacher Self-Efficacy

Researcher: Julie Stanley

Thank you for your interest in taking part in this research. Before you agree to take part, the person organizing the research must explain the project to you. If you have any questions arising from the Information Sheet or explanation already given to you, please ask the researcher before you to decide whether to join in. You have been given a copy of this Consent Form to keep and refer to at any time (in your original email).

I have read the notes written above and the Information Sheet and understand what the study involves.*

yes

no

I understand that if I decide at any time that I no longer wish to take part in this project, I can notify the researcher and withdraw immediately with no adverse consequences whatsoever.*

yes

no

I consent to the processing of my personal information for the purposes of this research study. All data will remain anonymous throughout.*

yes

no

I understand that such information will be treated as strictly confidential.*

yes

no

I agree that the research project named above has been explained to me to my satisfaction and I agree to take part in this study.*

yes

no

Your first and last name:* (electronic signature of consent) [short answer]

Your email address to receive the survey link: * [short answer]

Appendix H

Focus Group Informed Consent

Focus Group Informed Consent

I understand that feedback is being collected about my participation experience in the new teacher induction support program. The purpose of holding this focus group is to gain a better understanding of the impact of the program on novice teachers' self-efficacy in using effective instructional strategies, engaging students in active learning, and managing classroom student behavior. I also understand that anything I say in this group will remain confidential. My signature below indicates my willingness to participate in this focus group.

Participant Name:

School Name:

This image shows a blank sheet of white paper with horizontal black ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible on each side of the central vertical crease. The paper appears to be a standard notebook or composition paper.

Appendix I

Permission to use TSES Instrument

— 00 —

William & Mary School of Education

MEGAN TSCHANNEN-MORAN, PHD
PROFESSOR OF EDUCATIONAL LEADERSHIP

November 6, 2015

Julie,

You have my permission to use the Teacher Sense of Efficacy Scale (formerly called the Ohio State Teacher Sense of Efficacy Scale), which I developed with Anita Woolfolk Hoy, in your research. You can find a copy of the measure and scoring directions on my web site at <http://wmpeople.wm.edu/site/page/mxtsch> . Please use the following as the proper citation:

Tschannen-Moran, M & Hoy, A. W. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education*, 17, 783-805.

I will also attach directions you can follow to access my password protected web site, where you can find the supporting references for this measure as well as other articles I have written on this and related topics.

I would love to receive a brief summary of your results.

All the best,

Megan Tschannen-Moran
The College of William and Mary
School of Education

Appendix J

TSES: Frequency of Responses

Self-Efficacy Frequency of Response

	1.0 None	2.0	3.0 Very Little	4.0	5.0 Some	6.0	7.0 Quite a Bit	8.0	9.0 Great Deal
1. How much can you do to get through to the most difficult students?	0 0%	0 0%	1 3.1%	2 6.3%	4 12.5%	8 25%	11 34.4%	3 9.4%	3 9.4%
2. How much can you do to help your students think critically?	0 0%	0 0%	0 0%	2 6.3%	5 15.6%	4 12.5%	10 31.3%	5 15.6%	6 18.8%
3. How much can you do to control disruptive behavior in the classroom?	0 0%	1 3.1%	1 3.1%	2 6.3%	4 12.5%	8 25%	5 15.6%	3 9.4%	8 25%
4. How much can you do to motivate students who show low interest in schoolwork?	0 0%	1 3.1%	0 0%	2 6.3%	10 31.3%	7 21.9%	8 25%	0 0%	4 12.5%
5. To what extent can you make your expectations clear about student behavior?	0 0%	0 0%	0 0%	0 0%	1 3.1%	3 9.4%	3 9.4%	8 25%	17 53.1%
6. How much can you do to get students to believe they can do well in schoolwork?	0 0%	0 0%	0 0%	0 0%	4 12.5%	3 9.4%	10 31.3%	5 15.6%	10 31.3%
7. How well can you respond to difficult questions from your students?	0 0%	0 0%	0 0%	0 0%	2 6.3%	5 15.6%	7 21.9%	13 40.6%	5 15.6%

8. How well can you establish routines to keep activities running smoothly?	0 0%	0 0%	0 0%	0 0%	1 3.1%	6 18.8%	5 15.6%	7 21.9%	13 40.6%
9. How much can you do to help students value learning?	0 0%	0 0%	1 3.1%	1 3.1%	5 15.6%	5 15.6%	12 37.5%	5 15.6%	3 9.4%
10. How well can you gauge student comprehension of what you have taught?	0 0%	0 0%	1 3.1%	0 0%	1 3.1%	6 18.8%	9 28.1%	10 31.3%	5 15.6%
11. To what extent can you craft good questions for your students?	0 0%	0 0%	1 3.1%	0 0%	2 6.3%	7 21.9%	8 25%	8 25%	6 18.8%
12. How much can you do to foster student creativity?	0 0%	0 0%	0 0%	1 3.1%	2 6.3%	6 18.8%	9 28.1%	6 18.8%	8 25%
13. How much can you do to get children to follow classroom rules?	0 0%	0 0%	1 3.1%	0 0%	1 3.1%	6 18.8%	12 37.5%	4 12.5%	8 25%
14. How much can you do to improve the understanding of a student who is failing?	0 0%	0 0%	0 0%	0 0%	5 15.6%	9 28.1%	8 25%	6 18.8%	4 12.5%
15. How much can you do to calm a student who is disruptive or noisy?	0 0%	1 3.1%	1 3.1%	2 6.3%	2 6.3%	9 28.1%	8 25%	4 12.5%	5 15.6%
16. How well can you establish a classroom management system with each	0 0%	0 0%	0 0%	0 0%	6 18.8%	4 12.5%	7 21.9%	8 25%	7 21.9%

group of students?									
17. How much can you do to adjust your lessons to the proper level for individual students?	0 0%	1 3.1%	0 0%	2 6.3%	1 3.1%	8 25%	9 28.1%	7 21.9%	4 12.5%
18. How much can you use a variety of instructional strategies?	0 0%	0 0%	1 3.1%	0 0%	4 12.5%	3 9.4%	10 31.3%	8 25%	6 18.8%
19. How well can you keep a few problem students from ruining an entire lesson?	0 0%	1 3.1%	1 3.1%	3 9.4%	3 9.4%	10 31.3%	6 18.8%	3 9.4%	5 15.6%
20. To what extent can you provide an alternative explanation or example when students are confused?	0 0%	0 0%	0 0%	1 3.1%	3 9.4%	6 18.8%	6 18.8%	10 31.3%	6 18.8%
21. How well can you respond to defiant students?	0 0%	0 0%	2 6.3%	2 6.3%	6 18.8%	8 25%	7 21.9%	4 12.5%	3 9.4%
22. How much can you assist families in helping their children do well in school?	0 0%	0 0%	1 3.1%	4 12.5%	1 3.1%	7 21.9%	10 31.3%	7 21.9%	2 6.3%
23. How well can you implement alternative strategies in your classroom?	0 0%	0 0%	0 0%	1 3.1%	3 9.4%	5 15.6%	11 34.4%	7 21.9%	5 15.6%
24. How well can you provide	0 0%	0 0%	0 0%	1 3.1%	3 9.4%	4 12.5%	10 31.3%	7 21.9%	7 21.9%

appropriate
challenges for
very capable
students?
