THE EFFECT OF A TEACHER INDUCTION PROGRAM ON TEACHER LEVELS OF EFFECTIVENESS IN A RURAL APPALACHIAN SCHOOL DISTRICT IN EAST TENNESSEE

A Dissertation

Presented to

The Faculty of the Education Department

Carson-Newman University

In Partial Fulfillment

Of the

Requirements for the Degree

Doctor of Education

By

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April 2018
Dissertation Approval

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April 14, 2018
Abstract
A quantitative research study was conducted to ascertain whether a teacher induction program in a small, rural Appalachian school district helped first year teachers be more effective teachers as determined by their Tennessee Education Acceleration Model (TEAM) Level of Effectiveness (LOE) scores. Teachers were matched for as many similarities as possible including age, sex, grade taught, subject taught, and the school to which they were assigned. To compare the means of the paired matches, a t-test for dependent samples was used. Based on previous research, it was hypothesized that the treatment group would have better TEAM LOE scores than the control group. However, this proved not to be true in this study. The TEAM LOE scores of the control group were statistically significantly higher than the treatment group. The study found that the teacher induction program in a rural Appalachian school district did not benefit the novice teachers by helping them become more effective teachers. In fact, the treatment group scored lower on the TEAM LOE evaluation than the control group. To find the reason for the unexpected results of this study, many questions and answers were considered. The reason for this unusual finding can most likely be attributed to a Tennessee Educator Policy that went into effect in 2014. In 2014 a new policy was adopted by the Tennessee State Board of Education. The policy stated that “all preparation programs must include training to support candidates’ understanding of a state approved educator evaluation framework. Programs are encouraged to employ state-approved evaluation tools for the purpose of evaluating candidates during clinical experiences” (Tennessee Educator Preparation Policy, 2014). Thus, the control group was likely taught the components evaluated in TEAM evaluations and were also likely evaluated using TEAM evaluations during their student teaching therefore giving the control group an advantage over the treatment group and accounting for why the control group had better Level of Effectiveness scores than the treatment group. It was concluded that induction programs are valuable for novice teachers. However, there is room for improvement in what is included in induction programs.

Keywords: Induction program, Level of Effectiveness (LOE) scores
Dedication

This dissertation is dedicated to the special loves of my life. First, to the memory of my grandmother. She helped me become the person I am. Although she passed away long before I started my doctorate she would be proud.

To my husband, Bill, who has been with me for many years and made them the best years of my life. You are the love of my life. Without your love and support I could not have done this.

To my children, Jason, my firstborn who gave me the joy of becoming a mother. To Heather whose love and encouragement keeps me going. My life has been truly blessed by both of you. I am proud of the adults you have become. I love you forever.

To my grandchildren. You are the lights of my life. I am blessed with the best grandchildren ever. I love you with all my heart.

To Grandma, Bill, Jason, Heather, Jay, Andrew, and any grandchildren yet to be born...this labor of love is dedicated to you.
Acknowledgements

First, I give thanks to God, for with Him “all things are possible” Matthew 19:26. He has given me the intelligence and perseverance to attain this life-long goal. I could do nothing without Him.

I thank the members of my committee for their willingness to share their expertise with me. Dr. Brian Sohn and Dr. P. Mark Taylor whose expertise was invaluable and their patience unending. Thank you to Dr. Tamara Gray, your encouragement and kind words helped me keep going. Thank you to Dr. Christy Walker, you helped polish the finished product. I am grateful to all my professors at Carson-Newman for always being there with help and a kind word of encouragement.

Thank you to Curriculum and Instruction Supervisor Jamie Pemberton. I don’t know where to begin. You have been there encouraging me and helping me from the first semester of my doctoral program to the conclusion of my dissertation. I am indebted to you for all your help.

Thank you to my husband, Bill, for being the best editor around! Also, for funding my “hobby” of going to school.

Thank you to Heather for all the prayers and computer help. You are a blessing!

Thanks to Delta Kappa Gamma Society International for the scholarship I received. I spent it well.

I thank everybody who had any part in helping me get to this point in my education. I could not possibly name everybody but please know you are appreciated.
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CHAPTER 1

Purpose and Organization

First-year teachers enter the school system with newly earned college degrees and freshly minted teaching certificates ready for the challenge of making a difference in the lives of their students and in the education system. They are excited to have been hired for their first teaching position. They show up at their assigned schools where the principal welcomes them, takes them to their classrooms, gives them the key…and then he leaves. Many times, these novice teachers are not sure where to begin. What do they do next? Who can help them? With unanswered questions, even the bravest of beginning teachers may begin to feel apprehensive and insecure. Where are the curriculum guides, the resources, and other needed supplies? The new teacher wonders where to start. Does she start with a class roster; does she arrange the room first; has she filled out all the necessary paperwork; what levels are her students on? She is beginning to feel stressed and the students have not even come to class yet.

For most teachers, their first years in the classroom are the most challenging. The many unfamiliar demands cause anxiety among beginning teachers. Novice teachers are often left to figure things out on their own. Even so, some first-year teachers manage to thrive in the classroom. Others simply survive. It is during these first critical years that many novice teachers walk away from the profession altogether (Gray & Taie, 2015; Ingwalson & Thompson, 2007; Martin, 2012).

Teachers have a higher annual turnover rate than other occupations, with new teachers especially prone to leave during their first three years in the classroom (Ingersoll & Smith, 2003; Martin, 2012). High attrition rates are especially problematic among beginning teachers in low income and high minority population areas (Martin, 2012). Small rural schools and inner-city
schools do not always have the resources that are necessary to retain the number of new teachers they need to have a qualified teacher in every classroom. The Appalachian Regional Commission (ARC) says that for these reasons retaining effective teachers is difficult in rural Appalachian areas (Pollard and Jacobsen, 2017).

Furthermore, teacher turnover has an adverse effect on student achievement. Ronfeldt, Lankford, Loeb and Wyckoff (2013) found that within the same school and during the same year test scores were lower by 7.4% to 9.6% of a standard deviation in math due to teacher turnover. The same research showed that scores were 6% to 8.3% of a standard deviation lower in ELA in years that schools had 100% teacher turnover when compared with years in which there was no turnover in a school. Teacher turnover had a negative effect on all schools whether they were big or small, old or new.

**Background of the Study**

With the implementation of No Child Left Behind in 2002 by President George Bush, teachers were feeling more pressure than ever to produce student achievement growth (Christian, 2010). However, in 2012, President Barak Obama started granting some flexibility to the states regarding the No Child Left Behind mandate if states developed “rigorous and comprehensive” plans that were designed to “close achievement gaps, increase equity, improve the quality of instruction, and increase outcomes for all students” (Every Student Succeeds Act, n.d.).

The Every Student Succeeds Act (ESSA), was passed by Congress in 2015 and was still in effect at the time of this study. The ESSA replaced the No Child Left Behind mandate. ESSA reauthorizes the Elementary and Secondary Education Act (ESEA) that was first signed into law by President Lyndon B. Johnson in 1965, with the goal of ensuring the “nation’s national
education law and longstanding commitment to equal opportunity for all students” (Every Student Succeeds Act, n.d.).

The goal for every teacher, both novice and veteran, is to effectively teach in ways that cause students to achieve academic success. New teachers become stressed because they are keenly aware of this expectation by leaders from U.S. Presidents, to Congress, to the local school districts but they are not always fully prepared to deliver.

Savage (2007) said the need for teachers is increasing and that administrators must hire and retain teachers that are the best and brightest. These “best and brightest” teachers are the ones that Smith and Ingersoll (2004) found many times are the teachers who were the most likely to leave (Smith & Ingersoll, 2004, p. 681-714). Attracting and keeping the most successful teachers in the classroom is not easy. One way to help accomplish the goal of attracting and retaining effective teachers is to have experienced teachers serve as a support system for them. Many times, these experienced teachers serving as academic coaches for the beginning teachers, make the difference in whether the novice teachers stay or go (Savage, 2007). Because research continues to prove the value of experienced teachers in helping new teachers, school districts have found that hiring veteran teachers to lead induction programs helps novice teachers be successful. Induction programs help new teachers become familiar with the school district and offer practical help in both group and individual situations.

Goldhaber (2016) said that “most studies find that teachers improve with additional experience only early on in their careers”. These studies make the case for instituting support and intervention programs as soon as possible with novice teachers. To accomplish this, school districts may assign mentors and/or academic coaches to work with new teachers.
For this study a *mentor* was an experienced teacher in a school who was assigned to help a beginning teacher in the same school and an *academic coach* was an experienced teacher who works with beginning teachers in the entire school district and who provides on-going professional, practical, and emotional support for the new teachers.

In the school district where this study was conducted, the induction program’s academic coaches looked at research studies to find ways to teach and support new teachers in the most advantageous ways; ways that would establish a successful induction program. Academic coaches were prepared to implement effective and successful induction programs using student outcomes to guide them. Because the school district in this study is in a rural Appalachia area, it was important to find information specific to that area. Research from the Appalachian Regional Commission was helpful in providing the needed information.

**The Appalachian Regional Commission**

The Appalachian Regional Commission (ARC) is a federal government agency that, along with thirteen state governments in rural Appalachia, focuses on 420 counties in the Appalachian region. The thirteen states include Alabama, Georgia, Kentucky, Maryland, Mississippi, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Virginia, and West Virginia. The mission of the Appalachian Regional Commission “is to innovate, partner, and invest to build community capacity and strengthen economic growth in Appalachia to help the Region achieve socioeconomic parity with the nation (Investing in Appalachia’s future, n.d.).

In the mid-1960s, at the recommendation of Presidents John F. Kennedy and Lyndon B. Johnson, Congress passed legislation to address the persistent poverty and the growing financial and economic despair of the Appalachian region. These statistics tell the story. One third of the
people in Appalachia lived in poverty, the per capita income was 23% lower than the national average, and the high unemployment rate and the stark living conditions had forced more than two million Appalachian people to leave their homes to try to find work in other places. (Investing in Appalachia’s future, n.d.).

In 1960, the governors in the Appalachian region started a group, the Conference of Appalachian Governors. The governors wanted to come up with ideas that would create a regional approach to help resolve the issues in Appalachia. In 1961, the governors took their ideas to then recently elected President Kennedy. Kennedy had seen the poverty during his campaign trips, especially as he traveled through West Virginia, and was concerned with what he had observed (Appalachian Regional Commission, n.d.).

Kennedy formed a federal-state committee in 1963 that came to be known as the President's Appalachian Regional Commission (PARC). President Kennedy directed PARC to draw up a wide-ranging program that would support economic development in the Appalachian area. The resulting program was outlined in a report in April of 1964 and was recommended by the Conference of Appalachian Governors as well as cabinet-level government officials (Appalachian Regional Development Act, 1964).

President Lyndon B. Johnson used PARC's report as the basis for legislation that was established with the bipartisan backing of Congress. The legislation was submitted to Congress in 1964. The Appalachian Regional Development Act (ARDA) was passed early in 1965 and signed into law (PL 89-4) on March 9, 1965 (Appalachian Regional Development Act, 1964).

The researcher for this study sought to find ways a teacher induction program can help successfully retain highly-qualified and effective teachers in the high-poverty rural areas of Appalachia.
Education Attainment in Appalachia

While overall educational attainment rates in the Appalachian region have improved over the past fifty years, Appalachia continues to be behind the national average. Fifty-seven percent of Americans have some education beyond high school but only 48% of Appalachians reach that education level (Investing in Appalachia’s future, n.d.). ARC uses a classification system that compares each county in the nation with national averages on three economic indicators. The three indicators include the “three-year average unemployment rates, per capita market income, and poverty rates” (Distressed counties, n.d.). Based on those comparisons, each Appalachian county is placed in one of “five economic status designations—distressed, at-risk, transitional, competitive, or attainment” (Distressed designation, n.d.). Distressed counties, as defined by ARC, are those that fall into the worst 10% of counties in the United States. At-risk counties are those counties that rank between the lowest 10% and 25% of the counties (Distressed designation, n.d.). Many teachers are leaving the profession, especially in their first years, and especially in high poverty areas that are found in the rural Appalachian areas in East Tennessee. To help stem the flow of teacher leaving, teacher induction programs appear to be useful. Research shows the value of teacher induction programs for offering expertise that provides assistance to novice teacher as they learn ways to be confident and successful teachers result in school districts being able to retain effective teachers. In this dissertation I plan to research a school system in a rural Appalachian county listed as a “distressed” county for 2018 in the Appalachia Regional Commission report. Distressed counties, as defined by the ARC, are the most economically depressed counties in the Appalachian region. Distressed areas are identified as the poorest 10 percent of the nation's counties. The Appalachia Regional Commission report
makes this study more important than ever as researchers learn ways to help teachers better help their students be successful.

**Statement of the Problem**

When addressing the obstacles that new teachers face, F. T. Clark, from Baltimore’s Academic Intervention Team said, “new teachers need people who are observing and giving them feedback...they need support to help them refine what they do to overcome obstacles related to classroom management, lesson planning, grading, and contacting parents” (Smith, C., 2016).

Often new teachers do not realize the demands that will be put on them in their first years of teaching. As a result, they struggle when the support system is not strong enough to help them put into practice the knowledge and ideas they learned during their college years (Martin, 2012). Research clearly shows the importance of having a support system in place for new teachers, including mentors and coaches (Martin, 2012; Ingersoll and Smith, 2004; Smith, C., 2016; and Fry, 2007).

Fry (2007) interviewed new teachers as part of her qualitative research. She quoted one of the new teachers, Stella. Stella words illustrated the importance of support for novice teachers. Stella put it this way, “I was ready to quit the Tuesday after we started… everything was overwhelming. I know I student taught the first day [of school] but it’s different when it’s all on you. I need to get my feet under me, but they’re just not there yet”. She also confided that “everyone keeps telling me the 1st year is the hardest, and it better be because otherwise I don’t want to do this” (Fry, 2007).
Problems are even more prevalent in rural areas (Dillon, 2011; Distressed counties, n.d.; ESSA, n.d.; Gray & Taie, 2015; Hanford, 2017; Wright, Cunningham, & Stangle, 2016). Thus, making the need for academic coaches there even greater.

**Purpose of the Study**

The purpose of this study was to determine whether a teacher induction program in a small, rural Appalachian school district helped first year teachers be more effective teachers as determined by their Tennessee Assessment System TEAM (Tennessee Education Acceleration Model) Level of Effectiveness (LOE) scores.

In July 2011, Tennessee became one of the first states in the United States to implement a comprehensive statewide teacher evaluation system. The system was based on student outcomes and was a key component of Tennessee’s First to the Top Act that was adopted during the 2010 federal government’s initiative, Race to the Top. The new evaluation system was put into effect during the 2011-2012 school year. The evaluation was comprised of 50% student achievement data, Tennessee Value-Added Assessment System (TVAAS) or other comparable measurement counted for 35%, and 15% was based on additional measures of student achievement adopted by the State Board of Education and chosen with mutual-agreement by the teacher and the evaluator. The other 50% of the evaluation was determined through qualitative measures such as “teacher observations, personal conferences and review of prior evaluations and work” (Tennessee Department of Education: First to the top: Report on year one, n.d.).

An important element of the First to the Top Act was the creation of the Teacher Evaluation Advisory Committee (TEAC) which was made up of “teachers, principals, superintendents, legislators, business leaders, and other community members.” The TEAC group chose the Tennessee Educator Acceleration Model (TEAM) rubric as their choice for teacher
evaluations. The TEAM evaluation model used the National Institute for Excellence in Teaching’s (NIET) evaluation model. For the development of the model, NIET had reviewed instructional guidelines and standards developed by many national and state teacher standard organizations and a wide-ranging set of standards (Tennessee Department of Education: First to the top: Report on year one, n.d.). I decided the TEAM rubric would be the most useful and convenient evaluation tool to use in gathering the research data for the dissertation study.

For a teacher to be able to be successful, he or she must practice what research shows to be qualities of the best teachers, as indicated in the TEAM rubric. Dr. K. Anders Ericsson’s Expertise Theory (2015) offers a unique theory of how important practice is in becoming successful.

**Theoretical Framework**

The theoretical framework for this study is Ericsson’s Expertise Theory. Ericsson believed that the amount of practice a person has, along with a quality curriculum and expert coaching, can help novice teachers develop the expertise to be effective teachers (Deans for Impact, 2016).

Ericsson’s expertise theory promotes a practice where a person learns from a quality curriculum combined with the efforts of skilled coaches. Ericsson believes that this combination may predict the rate at which the novice learns and ultimately the limits of the growth of proficiency within a given field (Expertise theory, 2015). Dr. K. Anders Ericsson is a professor at Florida State University and the leading authority in “the acquisition of expert performance and deliberate practice” which is known as the expertise theory (Department of Psychology, 2015).
According to Deans for Impact (2016), the expertise theory espouses the ideas of pushing one’s self out of the comfort zone, to work toward “well-defined specific goals”, to focus on practicing over-and-over again, to “receive and respond to high-quality feedback”, and to “develop a mental model of expertise” (Deans for Impact, 2016).

While correct practice is invaluable, there are drawbacks to Ericsson’s Theory. Some researchers, like Clear (2017), critique Ericsson’s theory because it does not take genetic determinism into account. Clear (2017) opined that, in recent years, “behavioral geneticists have discovered that our genes impact nearly every human trait…your genes impact everything from your short-term memory abilities to your mental processing speed to your willingness to practice” giving credence to the knowledge that both nature and nurture play a role in human development.

Ericsson’s Expertise Theory is used as the theoretical framework in this study for five reasons. The five reasons are that novice teachers need a coordinated program, new teachers need to work to achieve clearly set goals, beginning teachers can benefit from practice, novice teachers need support and encouragement from proficient teachers, and they need to put into practice what they learned from the quality feedback (Deans for Impact, 2016).

This leads one to wonder if and how Ericsson’s theory impacts new teachers. Does practice, with the guidance of expert teachers in an induction program, cause new teachers to improve?

**Research Question and Null Hypothesis**

Research Question: What is the impact of a teacher induction program on the evaluation scores of beginning teachers compared to beginning teachers who did not participate in a teacher induction program?
Null hypothesis: There is no significant difference between teacher evaluation scores of first year teacher that participated a teacher induction program and teacher evaluation scores of those who did not participate.

**Limitations and Delimitations**

Limitations are aspects of a study that cannot be controlled. The accuracy and completeness of the data in this study were dependent upon the reliability of the TEAM evaluation rubric and the accuracy with which the TEAM certified educational leaders in the district conducted the evaluations. Other limitations were based on racial diversity. No African-Americans, Hispanics, or Asians were part of this study because none were hired during the duration of the study. Caucasians were the only new teachers hired during the time-period.

Delimitations refer to those aspects of the study controlled by the researcher. The researcher delimited this study by focusing on the geographic area of Tennessee’s rural Appalachian region and by selecting new teachers who participated in a teacher induction program that was lead, in part, by the researcher. It should also be noted that, for this study, some first-year teachers were assigned to positions that did not have a teacher with whom they could be matched and therefore, could not be included in the study.

**Assumptions**

While the social context in which schooling occurs is an important factor in achievement, for the sake of this study, it was assumed that the key to quality education is outstanding instruction and that outstanding instruction could be measured through teacher evaluation scores. Following that assumption, further research was conducted and several studies were found that did, indeed, link teacher effectiveness to student learning and achievement (Goe, Bell & Little, 2008; Hiring the best teachers, 2003; Tucker & Stronge, 2005).
More research revealed that teacher quality, or lack thereof, impacted students for years to come. Many researchers agree that it is the teacher who makes the difference (Bennett, 2012; Teacher quality and student achievement, 2005; Wong & Wong, 2009).

Another assumption was that principals played a larger role in teacher quality than simply conducting evaluations. Researchers found that the main role of a principal is to improve teaching and learning which leads to greater student achievement (Trach, 2014; What research says, 2013).

A further assumption, backed by research studies, was that retaining good teachers is especially difficult in the high-poverty rural areas of Appalachia (Hanford, 2017; Wright, et al., 2016).

Finally, this study assumed that principals and other school administrators would be aware of the goals of the teacher induction program in the school district. They would fully understand and agree with the goals of the induction program, so they would be able to help the academic coaches as they worked with new teachers (Carver, 2003).

**Definition of Terms**

*Academic coach* - an experienced teacher who instructs and supports teachers in ways that help improve their teaching skills (Stern, 2012).

*Appalachia* – an area made up of thirteen high-poverty states along the Appalachia trail. The states include Alabama, Georgia, Kentucky, Maryland, Mississippi, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Virginia, and West Virginia (Investing in Appalachia’s future, n.d.).

*Evaluation* - the making of a judgment that focuses on performance based on previously established criteria (Rebore & Walmsley, 2007, p.381).
**External network** - participating in a community of colleagues that are not in your immediate work environment; used for support, advice and help (What is networking, 2017).

**Feedback** - information about reactions to a person's performance of a task and is used as a basis for improvement; information about how we are doing in our efforts to reach a goal (Wiggins, 2012).

**First-year teacher** - a teacher who is an actual first-year teacher or one who is a first-year teacher in the school system.

**Novice teacher** is a teacher who is new to or inexperienced in the field of education.

**Poverty** - the state of being extremely poor.

**Teacher induction program** - a professional development opportunity for first-year teachers to:
1) acclimate new employees to the policies and procedures of the school system; 2) enhance and expand teacher effectiveness to improve student achievement; 3) build a community of teachers who will work as a team to solve problems and offer mutual support; 4) provide resources, a time and place to ask questions, solve problems, and voice concerns; and 5) provide on-going support and training.

**Turnover rate** - the percentage of employees in a workforce that leave during a certain period-of-time and are replaced with new employees (Mayhew, 2017).

**Veteran teacher** - a teacher who has had many years’ experience.

**Organization of the Document**

Chapter One of this document includes the purpose and organization of this study and provides an introduction and background. The chapter also notes the statement of the problem and the purpose and significance of the study. Chapter One defines the theoretical framework, research question, and null hypothesis. Limitations, delimitations, and assumptions for the study
are identified. Finally, this chapter includes the assumptions of this study and gives definitions of vocabulary used in the dissertation.

Chapter Two is a comprehensive literature review related to the topic and includes discussion of specific literature related to the current study.

Chapter Three discusses research methodology and includes the population and sample used in this study. This chapter also gives a description of procedures that were used for the study and includes the time-period of the study, how the data was analyzed, and responds to the research question.

Chapter Four discusses the population and sample used in the study, explains how matching pairing were selected, describes the Tennessee Educator Acceleration Model (TEAM) Level of Effectiveness (LOE) evaluation components and why this criterion was used to evaluate teacher effectiveness. Chapter Four also includes a description of the evaluation instrument, the collection of data, the time period of the study, research procedures, how the data were analyzed to test the hypothesis, and provide results of the study.

Chapter Five provides a review of previous research, discusses how school districts responded to the research, addresses how Ericson’s Expertise Theory connects to the study, gives the expectation of the study, and the results of the study in relation to the review of literature. Chapter Five continues by asking questions that arose from the results of this study to endeavor to discover the answers to the questions or to identify where further research studies need to be conducted. Chapter Five discusses implications of the study, recommendations for schools, and recommendations for further research. The Chapter concludes with a summary.
CHAPTER 2

Review of Related Material

Most beginning teachers enter the profession with vitality and drive and, almost always, a strong desire to help children learn (Protheroe, 2006, p.34). Yet, all too often, teachers who would become excellent teachers are overwhelmed by their first year in the classroom and they leave (Fensterwald, 2015; Smith & Ingersoll, 2004). This study endeavored to find out the factors that caused these teachers to leave the profession and how teachers could be retained in the classroom.

To find the answer, a systematic literature review was conducted for research on retaining new teachers. Most of the studies ranged from 2008-2017 however, some earlier studies are noted to give a history of mentoring and teacher induction and to gain insight into the early years of mentoring and teacher induction programs. Many internet sites for research articles were perused including Google, GoogleScholar, and ERIC for articles on retaining teachers in the classroom and helping new teachers become successful educators. A plethora of studies in educational journals such as Edutopia; Administrative Issues Journal, Education, Practice, and Research; Education Week; National Comprehensive Center for Teacher Quality; Principal; and the NAASP Bulletin were studied. The American Educational Research Journal was especially helpful with research on the effects of teacher turnover and the effects that induction programs and mentoring have on beginning teachers. Newspaper articles and other news organizations including the New York Times, CBS News – Austin; and Hearst Newspapers LLC. Government publications from the United States Department of Education proved to be an excellent source of up-to-date statistics with the Appalachia Regional Commission reports providing the most current research statistics from the Appalachian region. Educational Leadership, the journal
associated with the Association for Supervision and Curriculum Development, provided research and practical ideas.

To answer the question of whether teacher induction programs helped teachers have better evaluation scores, it was important to know how many teachers left the field of education, particularly during their first five years of teaching. Teacher attrition was a problem which led to the study of other literature to find out if and how that impacted students and schools. Thirdly, it was prudent to discover the reasons teachers gave for leaving and seek to identify ways school administrators could stem the tide by providing appropriate interventions with these new teachers. The study of literature revealed that teacher induction programs could help retain beginning teachers. That finding led to a continued review of literature to find out what interventions had been successfully used in teacher induction programs. Since the school system for this dissertation study is in a rural Appalachian area, more literature was read to find information about any special concerns that exist in rural Appalachian areas and what interventions had worked to keep effective teachers in the classrooms in those schools. The summary of the literature review will discuss how teacher induction programs could help teachers in rural Appalachia become successful teachers; teachers who have satisfactory teacher evaluation and level of effectiveness scores.

This chapter will address eight areas and a summary of the literature review. The eight areas include teacher attrition, the impact of teacher attrition, reasons teachers leave the profession, interventions for beginning teachers, meeting the needs of new teachers, teacher induction programs, special challenges of Appalachian schools, and interventions for beginning teachers in Appalachia.

**Literature Related to the Topic**
Teacher Attrition

The first five years of teaching were difficult for most teachers. A teacher’s first year in the classroom was an especially challenging year for beginning teachers. Novice teachers faced a plethora of unknows as they began their first year in the classroom. The ways these unknowns were addressed had an impact on the success or failure of their teaching careers.

Gray and Taie (2015) researched public school teacher attrition and mobility of new teachers in their first five years of teaching for the U.S. Department of Education. They presented their findings for the “five years of 2007-08 through 2011-12 for teachers who began teaching in the calendar year 2007 or 2008 and taught at least one regularly scheduled class in a public school in the 2007-08 school year”.

Approximately ten percent of new teachers, according to Gray and Taie (2015), will leave the profession in their first year. That number will increase to 12% in year three. By their fifth year, 17% of the new teachers will have left. Statistics, often quoted from previous research by Smith and Ingersoll (2004), had shown an even higher attrition rate. Smith and Ingersoll (2004) believed that as many as 50% of new teachers left the teaching profession within their first five years.

With the discrepancy in the research, which statistics are educators to believe? Who is right? Gray and Taie (2015) whose study began in 2007 or the Smith and Ingersoll report in 2004? It was important to find out why these two sets of researchers came to differing conclusions. Fensterwald (2015) set out to find the answer. He explained that Smith and Ingersoll’s (2004) findings were based on yearly estimates and, additionally, Smith and Ingersoll (2004) did not track what happened to individual teachers after the first year. Smith and Ingersoll’s (2004) data included private school teachers and did not include the 3% of teacher
who left but returned to teaching within five years. Even though the two studies were only three years apart, Fensterwald (2015) said the differences in the findings between the two studies could be partly attributed to the difference in the time periods in which the studies took place (p.2). Fensterwald (2015) made the comparison of the research done by Gray and Taie (2015) and Smith and Ingersoll (2004). However, he did not include other studies in his research.

In another more recent study, Sutcher, Darling-Hammond, and Carver-Thomas (2016) reported that the teacher attrition rate is still high, at 8% each year. Two-thirds of the teachers who left did so before retirement age.

This finding led to the next question *how does teacher attrition impact students and schools.*

**The Impact of Teacher Attrition**

Research indicated that the high numbers of teacher who leave the profession each year has an adverse effect on student achievement. Ronfeldt, et al., (2013) discovered that within the same school and during the same year test scores were lower by in math due to teacher turnover. Additional research showed lower scores in ELA, as well (Meyer, 2013; Ronfeldt, et al., 2013). Podolsky, Kini, Bishop, & Darling-Hammond (2016) said that hiring and retaining good teachers “is especially urgent in schools serving concentrations of low-income students and students of color, because teacher attrition disproportionately impacts their schools” (p. 1.). The higher rate of teacher turnover in these high-poverty schools caused them to have a higher concentration of inexperienced teachers. This trend has a long-term impact on student learning, especially for students in the most underserved communities according to both Guin (2004) and Podolsky, et al., (2016). Many research studies found that when teachers left the profession it proved costly to school systems and detrimental to student learning (Guin, 2004; Podolsky, et al., 2016; Meyer,
Researchers Guin (2004) and Fulton, Yoon, and Lee, (2005) found that a low teacher retention rate was difficult for the school districts. Teacher turnover was indicative of possible underlying problems in the ways in which the schools were operating. Teacher turnover was disruptive to the quality of the school and could indicate poor school performance. Furthermore, constant teacher turnover could have a negative effect on curriculum planning, scheduling, and teacher collaboration thus causing a less than coherent instructional program (Guin, 2004; Fulton, et al., 2005). However, as much as the schools were negatively impacted, it was even harder for the students who were left with the least qualified and inexperienced teachers year-after-year (Guin, 2004; Fulton, et al., 2005).

A study conducted by Sanders and Rivers (1996) at the University of Tennessee concluded that the children who had the most effective teachers three years in a row showed academic achievement gains that were 52 to 54 points higher than the gains of children who had the least effective teachers three consecutive years.

Several studies opined that increased retention of new teachers should not be mistaken with more effective teaching. The goal must be to retain effective teachers. (Feiman-Nemser, Schwille, Carver, Yusko, 1999). Also, it was noted that not all teacher turnover negatively affects student achievement. Brown (2016) found that when low-performing teachers left it led to improvement in average student achievement. Also, in 2016, the University of Virginia found that targeted teacher turnover actually boosts teacher quality and student achievement (University of Virginia, 2016).

A literature review found that it is important to keep the best and most effective teachers in the classroom because it helped students better meet yearly academic goals. This finding led to
a review of literature on why teachers left the field. Which teachers are leaving, why they are leaving, where they are going, and what causes the differing rates of attrition?

**Reasons Teachers Leave the Profession**

Research indicated that teachers leave the field for many reasons. One might think retirement is the leading cause of teacher attrition but Ingersoll (2001) and Sutcher, et al., (2016) say that is not true. Teachers who leave the profession most often note some sort of dissatisfaction as their reason. In his 2001 research study Ingersoll listed thirteen reasons teachers leave. First, they left because they did not have enough support from their school administrators and teacher salaries are poor. Teachers were dissatisfied because of problems with student discipline. Other teachers said they left because they did not have any influence over school policies. Still other teachers left because students were not properly motivated and class sizes were too large. Other teachers mentioned that they did not have time to properly prepare. Some teachers left because of unsafe working conditions. Teachers also left due to lack of opportunities for advancement and a lack of support from the communities in which they taught. Teachers left because there was too much interference from others about what they were teaching. Finally, teachers said they left the profession because they did not have effective teachers as colleagues and they lacked time to work with students. Many new teachers indicated that they left for the same reasons (Ingersoll, 2001; Ingersoll & Smith, 2004).

Research studies identified many factors that influenced teachers’ decisions on whether to enter the field of education, whether to stay in the field, and whether to leave the teaching profession. In this section I will discuss many factors that Ingersoll found significant in 2001 and will include what more recent researchers have shown that influences teacher’s decisions to stay or leave.
Teacher salaries. Teacher salaries were one of the most often cited reasons affecting whether a teacher stayed in the field or left (Bland, Church, & Luo, 2014; Goldberg & Proctor, n.d.; Ingersoll, 2001; Ingersoll & Smith, 2003; Podolsky et al., 2016). Podolsky, et al., (2016) found that, in general, teacher salaries in the United States are lower than those of other college graduates even after adjustments are made for the shorter work year for teachers. There is even considerable variation in salaries between states. Beginning teachers nationally earn about 20% less than their peers with college degrees in other fields, a wage gap that may eventually widen to 30% in a few years (Podolsky et al., 2016).

The differences in the salaries of teachers compared to other jobs that required a college degree becomes larger over time. Podolsky et al., (2016) noted that “in 1994, public school teachers earned similar compensation (including salary, health benefits, and pension) as other workers with a college degree. In 2015, teachers earned 11% less in total compensation (including benefits)”. Podolsky, et al., (2016) also found sizeable differences in teacher salaries even among districts within the same labor market. This disparity leaves some high-poverty school districts at a strong disadvantage in hiring. An analysis of national data found that the best-paid teachers in schools that were not in high-poverty areas were making 35% more in salaries than their peers in high-poverty schools (Podolsky, et al., 2016).

Working conditions. Working conditions were strongly considered to be a reason that beginning teachers decided whether to stay or leave (Ingersoll, 2001; Ingersoll & Smith, 2003; Podolsky, et al., 2016; Wong & Wong, 2009). The concerns of the beginning teachers were often more than what one would think were strictly working conditions. Many times, it seemed to be more a case of being unable to meet the expected requirements of the job.
Weinstein (1988) found that the responsibilities of new teachers were considerably different from veteran teachers. New teachers were assigned the least desirable tasks, had the largest or most problematic classes, and the least desirable extracurricular assignments.

Ingersoll (2001) and Fry (2007) found that beginning teachers were often over-whelmed with too much workload. They were over-whelmed by tasks veteran teachers took for granted like calculating grades and performing assessments for report cards. There was much more work than they expected. Ingersoll (2001) and Fry (2007) noted that new teachers were often surprised by the number of responsibilities they were expected to take on.

**Classroom management.** Almost universally, classroom management was presented as a problem for new teachers. A 2004 Public Agenda survey (Goodwin, 2012) found that 85% of teachers indicated they were unprepared for dealing with behavior problems in their classrooms. Ingersoll (2001) and Ingersoll and Smith (2003) said that many beginning teachers indicated that they wished their preservice programs would have better prepared them to deal with classroom management. It was common for the novice teachers to report feeling particularly overwhelmed when they dealt with the most problematic students.

**Dealing with diversity.** Dealing with diversity in the classroom was another concern of new teachers (Stansbury & Zimmerman, 2000). Students are diverse not only by ethnicity but are also different in their physical abilities. Gonzales-Mena and Pulido-Tobiassen (1999) said that teachers do not always know what to expect when they begin teaching students from backgrounds that are different from what they are familiar with.

**Working with colleagues.** Novice teachers indicated they needed to feel included and supported by their colleagues. New teachers sometimes felt discontent and left because they felt isolated from their colleagues (Fry, 2007). Scholastic and the Gates Foundations (Mirel &
Goldin, 2012) found that teachers did not spend much time collaborating with each other. They found that only about three percent of the teaching day was spent by teachers collaborating with their colleagues.

Mirel and Goldin (2012) found that 90% of teachers think that having time for collaboration with colleagues is important in the effort to retain good teachers and new teachers perceive their inability to meet with colleagues as a barrier to their success (Ingersoll & Smith, 2003; Martin 2012; Wong & Wong, 2009). However time was not always available for teachers to meet during the school day because of scheduling issues.

Protheroe (2006) agreed and went a step further. She said that new teachers wanted to observe expert veteran teachers and develop their skills under the guidance of the more experienced teachers. However, only a few beginning teachers indicated they had time to adequately access the wisdom of their experienced colleagues. Many times, class schedules did not allow for common planning with colleagues and such collaboration was neither expected nor encouraged by school leadership.

**Other concerns.** A lack of time for planning was a common reason new teachers gave for leaving the profession (Ingersoll, 2001; Thompson, Paek, Goe, & Ponte, 2005). Even when good matches were made between new teachers and mentors multiple demands of their time made it difficult for new teachers to spend adequate time with their mentors (Fulton, et al., 2005). New teachers were concerned about long commutes to work (Could commute impact, 2015). Supportive relationships with parents also proved to be a challenge for new teachers (Stansbury & Zimmerman, 2000; Wong & Wong, 2009). Additionally, beginning teachers indicated they would like more assistance with assessing student work (Stansbury & Zimmerman, 2000). Teachers sometimes worried that they would spend too much time on a few
concepts and would not be able to cover the curriculum as expected in the mandated time frame (Guskey, 2003).

Fulton, et al., (2005) said that advanced technology also appealed to new teachers along with a desire to be a part of an external network of teachers. Sometimes monetary resources for the technology that would support and help retain new teachers was difficult to obtain. Liepman (2017) related that this was especially true in high-poverty and inner-city schools due to the lack of financial resources. Several researchers (Ingersoll, 2001; Thompson, et al., 2005) noted that another major reason teachers left the profession was weak or inadequate school leadership. Thompson, et al., (2005) said that new teachers expected to receive the support they needed and if that did not happen they were more likely to leave.

**Interventions for Beginning Teachers**

This section discusses what research studies have found to be successful ways to retain beginning teachers. There was an attempt to find a solution to each of the problems that were listed in the previous section *Reasons Teachers Leave the Profession*.

**Teacher salaries.** Districts attracted a better pool of teachers overall when they could pay more. Additionally, school districts had to be competitive on salaries if they wanted to keep the best teachers. One way to keep teachers was by offering bigger paychecks and providing a positive work environment (Liepman, 2017).

Gray and Taie (2015) discovered that ninety-seven percent of the new teachers whose salaries started at or greater than $40,000 were teaching after their first year and 89% of those teachers were still teaching at the end of their study four years later. Eighty-seven percent of beginning teachers whose salaries were less than $40,000 were teaching after their first year and only 80% were still there four years later.
Working conditions. Situations where new teachers have the most undesirable classes and tasks need to be avoided when beginning teacher’s assignments are made (Feiman-Nemser, 2007). In pursuing this further, I found that Fulton, et al., (2005) felt that school leaders should even consider minimizing non-teaching responsibilities for new teachers, so they could have more time for induction experiences and Bland, et al., (2014) said that administrators should avoid assigning new teachers to the most difficult situations in the school. Additionally, effective principals helped the beginning teachers by “streamlining” administrative tasks as much as possible. This allowed the beginning teachers more time to concentrate on honing their teaching skills (Carver, 2003).

Classroom management. Carver (2003), Ingersoll (2001), and Ingersoll & Smith’s (2003) studies found that principals proved invaluable to novice teachers when they maintained discipline in the school. It was especially helpful to beginning teachers if they felt free to communicate with the principal about student behavior issues and how to effectively address them. Principals who maintained an orderly building and were actively involved in maintaining discipline in the school allowed new teachers to concentrate on teaching, rather than simply managing student behavior.

Marzano and Marzano (2003) found classroom management to be critical for student achievement and discovered that what teachers do to motivate students has twice as much impact on student achievement than do school policies such as curriculum and assessment. Also, a classroom management plan should suit the beginning teacher’s personality and be a plan that can be effectively put into practice without disrupting student learning (Marzano & Marzano, 2003).
Dealing with diversity. Gonzales-Mena and Pulido-Tobiassen (1999) note that as professionals who work with diverse families, teachers must be willing to help all children feel a sense of belonging and acceptance. The more teachers model this acceptance, the closer they get to forming meaningful bonds with other teachers, students, and the parents of their students.

Relationships with parents. According to Wang and Haertel (n.d.) teacher-parent relationships impact student learning and well-being. Teachers need to “involve parents in school management or classroom activities” as a way to “help establish and foster parent-teacher relationships” (p. 3). They also indicated a need to include parents in educational interventions because these interactions are “significantly more effective than those without parent involvement” and also proved to be a way to encourage parents to be more involved in the classroom and with their children, in general.

Meador (2017) found that building positive relationships with parents included letting them know the teacher has the child’s best interests at heart. He said this could be accomplished, in part, by new teachers making an encouraging call, or sending a note or email, to parents to tell them something positive about their child (Meador, 2017; Wong 2004). Meador (2017) further suggested that teachers listen to what parents are saying and allow them to have appropriate input.

Assessing student’s work. Guskey’s (2003) research found that when teachers utilize the results of the assessments to provide correction they help their students learn more successfully. Guskey (2003) said that, at first, extra instruction takes extra class time. But, as the students get used to the process and begin to realize the benefits, teachers were able to lessen the amount of class time for review and reteaching instruction. Teachers found goals could be accomplished through homework assignments or by offering before or after school assistance. Eventually the
students could proceed at a faster rate because major learning problems were avoided. In the end, the teachers found that they did not end up sacrificing curriculum coverage as they had feared. Ideally, the concepts and skills taught will be coordinated with the state and district standards (Guskey, 2003).

**Working with colleagues.** Carver (2003) promoted facilitating professional relationships between the novice teachers and the principal, as well as among peers throughout the system. Habegger (2008) indicated that colleagues who allowed new teachers to be part of the educational process and who demonstrated “encouragement, professionalism, and success” made the new teachers feel they were part of a team that worked together and gave them a sense of empowerment.

**School leadership/principals.** Strong administrative leadership was an important factor in hiring and retaining effective teachers (Goldberg & Proctor, n.d.; Ingersoll & Smith, 2003; Protheroe, 2006). An article entitled *What Research Says (n.d.)* found that new teachers who worked with principals they felt were effective and competent had much easier transitions into teaching than those who perceived the principals and administrators as being weak leaders.

Research by Goldberg and Proctor (n.d.), Ingersoll and Smith (2003) and Protheroe (2006) found that the first thing new teachers looked for in a principal was accessibility. Administrators with open door policies received high marks from the beginning teachers. They gave high scores to leaders who made it easy for them to ask questions and discuss problems, and to those who provided them with support, gave them direction, and helped them find solutions to the problems they inevitably encountered.

Protheroe (2006) further indicated that one of the most important jobs of the principal is to let the novice teachers know what is expected of them. Protheroe (2006) studied former
teachers who had five years or less experience. Participants indicated that it would have been valuable to them for principals to clearly communicate their expectations. They wanted to know what the administrators expected regarding student discipline and ways to manage time. They indicated that they needed help with lesson plans, as well (Protheroe, 2006).

Carver (2003) noted that new teachers appreciated school administrators and leaders who acknowledged and appreciated their efforts and who communicated support. Carver (2003) also said new teachers appreciated school principals who made the new teachers feel good about themselves and their performance. This went a long way in helping beginning teachers feel that they were in a safe, risk-free environment. Bland, et al., (2014) noted that these feelings proved to be conducive to effective teaching and learning (Bland, et al., 2014). Additionally, Carver (2003) found that school administrators were more effective in assisting new teachers when they had high expectations of both students and teachers.

When Carver (2003) interviewed a principal in a school that had little teacher turnover. The principal indicated she found that when she made a special effort to include the teachers in the decision-making process they were more content. She asked the teachers in each group to talk and they worked together with the goal of coming to a consensus on each issue that was presented. She viewed her role as a facilitator for the team. Additionally, Carver’s (2003) research found that encouraging teachers to be a part of the educational process opened the door for deeper and more substantial conversations with principals and colleagues. Principals who formed professional relationships with the novice teachers were valued by the new teachers. The new teachers appreciated it when the principal took time to ask how they could help. Building these positive relationships with the beginning teachers was important in helping retain new teachers (Carver, 2003).
As part of Carver’s (2003) qualitative study she interviewed principals to solicit their opinions on developing relationships with the teachers in their schools. One principal in the study said, “I'll ask about their families. I'll ask them about their kids. I develop a strong relationship with them. They know that I care about them as people. That relationship takes us a long way. It really opens the door for me to talk to them about superior performance.” When school administrators developed positive relationships with their beginning teachers they reported that they could be more open about addressing any concerns they had when they gave feedback to these teachers (Carver, 2003).

**Meeting the Needs of New Teachers: Teacher Induction Programs**

In the past two decades, the percentage of beginning teachers participating in new teacher induction programs has increased considerably (Ingersoll & Smith, 2004). Research by Thompson, et al., (2005) acknowledged that schools and school districts were increasingly turning to induction programs to help keep effective teachers in the classroom and to improve teacher practices with the goal of improving student achievement. I learned that teacher induction programs are useful and are often used to retain new teachers. But, what is an induction program?

I reviewed the literature to find out what was included in teacher induction programs that caused them to be used as successful intervention tools that provided the necessary help to retain the novice teachers.

**What is teacher induction?** Most teacher induction programs identified beginning teachers as those beginning their first year of teaching and sometimes included teachers for several years. Sometimes teachers who were new to the system, but not new to teaching, were included (Stansbury & Zimmerman, 2000).
Sun (2012) said that *teacher induction* has come to mean a range of ideas when it comes to supporting new teachers. Sometimes, teacher induction is seen in the form of a stand-alone mentor who meets with a new teacher a few times a year. Other times, teacher induction provides more comprehensive support services for novice teachers. Teacher induction programs run the gamut. They vary in their focus, the ways in which they are implemented, as well as their scope.

Sun (2012) said that teacher induction and mentoring are “two terms that are sometimes used interchangeably given that mentoring has become the dominant form of induction support over the last twenty years. But, while mentoring is an important component of an induction program, comprehensive induction is much more than pairing a new teacher with a veteran one for a specified period of time” (Sun, 2012). Comprehensive induction programs include a “multi-year support for new teachers for at least two years, high-quality mentoring utilizing carefully selected and well-prepared mentors, regularly scheduled common planning time with other teachers, ongoing professional development, and standards-based evaluation of new teachers throughout the process” (Sun, 2012). Researchers estimate that not even one percent of new teachers get this sort of comprehensive induction (Sun, 2012).

**Multi-year support for new teachers.** Along with Sun (2012), Wong (2004) also believed that quality induction programs include a “comprehensive, multiyear process designed to train and acculturate new teachers in the academic standards and visions of the district” (Wong, 2004, p.48). Additionally, Wong (2004) opined that successful induction programs began with an initial four or five days of induction before the school year began.

Wong (2004) suggested that an effective induction program would ideally be systemwide so that new teachers received comprehensive training and support from more experienced colleagues for two or three years then seamlessly become part of the professional development
program of the school district. Wong (2004) believed this kind of program would help keep new teachers in education and would help new teachers become more effective in their classrooms (p.42).

Using high-quality mentors to help new teachers. Gray and Taie’s (2015) research showed that mentors were helpful in retaining new teachers. Of the first-year teachers who were assigned mentors, 92% remained in education as opposed to 84% of those teachers with no mentor. In the following year of the study, teachers with mentors stayed at the rate of 91% but only 77% of those with no mentors remained. The last year of the study found 86% of the beginning teachers who had mentors were still in the classroom while only 71% of the teachers with no mentor were still actively teaching (Gray & Taie, 2015).

Fieman-Nemser (2003) allowed that academic coaches and mentors must be aware of their influence and strive to support the beginning teacher while modeling a positive attitude. When schools make mentoring assignments that are a good match with the new teachers’ backgrounds and interests, in addition to providing new teachers with easy access to resources and practical expertise, they feel supported. When they are offered regular opportunities for productive talk about teaching and learning, new teachers felt more supported by the professional community. Veteran teachers help beginning teachers reach their full potential when they help meet the needs of the beginning teachers. Fulton, et al., (2005) opined that it is up to academic coaches, mentors, veteran teachers, and other school leaders to help new teachers move through the transition period successfully. To help accomplish this, in addition to on-site mentoring, online networks for teachers were helpful in a new teacher’s experience because the professional online sites made it feasible for mentors, induction coaches, curriculum experts, and new
teachers to work together even when they are not in the same location or on the same schedule (Fulton, et al., 2005).

Sun (2012) noted that specifically, high quality academic coaches that were carefully selected and well-prepared proved to be an effective part of new teacher’s development. Smith (2016) gave insight into what proved to be high quality coaching. He discovered that effective mentors/coaches had the ability to have conversations with teachers about what effective teaching looked like. Effective coaches needed mentor training and time for the mentor and new teacher to work together on a regular basis with mutual commitment between the mentor and new teacher. A coach had the ability to reduce misunderstandings, and had relevant knowledge to share (Smith, 2016). When assigned mentors did not support the new teachers in ways the new teachers envisioned the new teachers were more prone to leave (Stansbury & Zimmerman, 2000).

**Common planning time with other teachers.** Ingersoll and Smith (2004) suggested that the most effective induction programs “offer bundles or packages of supports and, in particular, provide to beginning teachers a mentor from the same field and the opportunity to participate in group or collective planning and collaborative activities” (Ingersoll & Smith, 2004). Two of the most important requirements for effective mentoring were mentor training and plenty of time allotted for the mentor and new teacher to work together (Smith, C., 2016). Guskey (2003) found that another way to help beginning teachers is to assist them in learning ways to coordinate the concepts and skills taught in a lesson with the state and district standards. The concepts and skills that align with the state and district is the most important material and therefore the material that should be tested (Guskey, 2003).
**Ongoing professional development.** Sun (2012) acknowledged that another need that new teachers have is to be involved in Professional Learning Communities (PLC’s) during and after the induction program. Some induction programs offered professional development as part of the process. New teachers were helped by professional development that focused on answers to challenges they faced on a day-to-day basis, collaboration with other teachers, and opportunities for new teachers to ask questions, participate in finding the answers, and opportunities to reflect on what they found. Fry (2007) said that teacher induction programs were successful in helping new teachers feel like they were part of the school system which caused the novice teachers to become more likely to adopt the goals of the system.

And finally, Martin (2012) said that it is necessary to have comprehensive induction programs that include mentoring for individual teacher needs and provide for professional collaboration in a supportive culture.

The National Commission on Teaching and America’s Future reported that induction should introduce new teachers to learning communities where all teachers take responsibility for the growth and learning of all students and that school leaders should promote a professional culture that recognized the needs and skills of new teachers and promoted continuing communication of teachers across experience levels (Fulton, et al., 2005). Being able to collaborate with other teachers on instructional matters reduced the likelihood of beginning teacher turnover (Ingersoll & Smith, 2004). Starr (2015), interviewed second-year teachers who had completed their first year of teaching. The second-year teachers were asked to give advice to new first-year teachers. The second-year teachers agreed that it was important for novice teachers to know that the learning process needed to involve teachers, students, colleagues, and parents all working together for the success of the students (Starr, 2015).
Wong (2004) maintained that a successful induction program should provide study groups where new teachers could interact with each other and build support, commitment, and leadership in learning communities. Fulton, et al., (2005) believed that professional development is part of new teacher induction because novice teachers with “a seamless continuum in which content knowledge and pedagogical skills move in tandem through teaching, observation dialogue, and reflection” (Fulton, et al., 2005, p. 22). Furthermore, Fulton’s research stated that new teachers’ responsibilities should “be phased in as skills, experience, and expertise grow” (p.22). New teachers need continued professional development led by knowledgeable colleagues (Wong, 2004). By taking the professional development of mentor teachers seriously, induction programs increased experienced teachers’ skills for engaging in meaningful dialogue and cooperative work with novice teachers that are crucial elements in building authentic professional learning communities (Feiman-Nemser, 2007).

Wong (2004) found that, unless professional development programs were given careful thought, school districts would not have effective teachers who could produce the desired student achievement. To help teachers be effective, academic coaches needed to offer help by making classroom visits, conducting professional development programs on what effective teaching involves, helping teachers tie their teaching to national and state standards, model lessons, and co-teach with the beginning teachers. Danielson (2007) said that academic coaches need to share their expertise and help new teachers with curriculum planning, assessment, and data analysis. Academic leaders should also decide on a course of action and monitor the progress of the novice teacher. Wong (2004) believed that on-going professional development programs were an important component of successful induction programs and without carefully developed
programs, school districts would not have effective teachers who could produce desired student achievement results (Wong, 2004).

Wong (2004) further stated that successful induction programs should consist of a system-wide, coherent, comprehensive training and support process continued for two or three years and then seamlessly become “part of the lifelong professional development program of the district to keep new teachers teaching and improving toward increasing their effectiveness” (p.42). He also indicated that induction programs need to provide a connection that is structured around a learning community where every teacher, both new and veteran teachers, are treated with respect and where every teacher’s input is appreciated (Wong, 2004).

**Standards-based evaluation of new teachers through the induction period.** Principals are responsible for evaluating new teachers but are also responsible for developing nurturing and positive conditions in the schools that will support beginning teacher’s development (Carver, 2003; Goldberg & Proctor, n.d.).

**Practical support.** By many accounts, it takes teachers three or four years or longer to become proficient (Feiman-Nemser, 2003; Habegger, 2008; Meador, 2017). Beginning teachers need to meet their colleagues and mentors. They need to become familiar with the lay out of the school. Novice teachers need help in arranging their rooms, gathering supplies and resources, and with implementing a behavior plan. They need to know what the principal expects of them, the scope and sequence of the curriculum to be taught, and how to deal with the parents and the community.

When the top five styles of induction support that third-year teachers received were compared by Savage (2007), he found that the two strategies that received the highest mean ranking in terms of effectiveness were “locating materials, supplies, equipment, or books, and
incorporating state standards and performance objectives respectively”. Fulton, et al., (2005) found that, in addition to the responsibility of teaching and inspiring students to learn, new teachers also had to learn the ropes. They needed to learn the policies and procedures of the school and the school district. New teachers needed to learn how to successfully teach the assigned curricula. They needed to be aware of testing requirements. Additionally, they needed to find ways to fit in with the culture of the school and get to know the community in which they work. Stansbury and Zimmerman (2000) noted that when beginning teachers took on even the most basic tasks for the first time, they benefited from support of veteran educators.

Successful induction programs encouraged school leaders to show a strong sense of administrative support, incorporate a mentoring element, and present a structure for modeling effective teaching during professional development and in the context of the classroom (Wong, 2004).

**Meeting colleagues.** Because new teachers desired to meet with their colleagues, but it was not always possible during the school day, Alber (2012) offered some suggestions. She suggested that new teachers meet with their colleagues by eating lunch together or by making time to co-teach with veteran teachers as a way to learn from them. New teachers may even find times to meet with veteran teachers outside the classroom by having coffee together or taking a walk (Alber, 2012).

In the school district where this study will take place, the induction program’s academic coaches looked at research studies to find ways to teach and support new teachers in the most advantageous ways that would establish a successful induction program. Academic coaches were prepared to implement effective and successful induction programs using teacher evaluations to guide them.
A continuing literature review was useful in learning what administrators and other school leaders could do to intervene with teachers to help them stay in the system and become more effective. Because this dissertation study would take place in rural Appalachia, a literature review was conducted to find out if there were any special challenges of retaining new teachers in rural Appalachia.

**Special Challenges of Appalachian Schools**

Teachers in high-poverty and high minority schools have higher attrition rates. The southern region of the United States has an exceptionally high turnover when compared to other areas of the country. Part of the reason for this discrepancy is teacher pay (Sutcher, et al., 2016). However, the majority of the teachers who leave the profession do so because they are dissatisfied with teaching conditions (Sutcher, et al., 2016). Wright, et al., (2016) found that keeping good teachers is an especially difficult task in the high-poverty rural areas of Appalachia. Indeed, their study indicated that many teaching positions go unfilled every year for lack of, or no, qualified applicants.

The regional needs assessment from the Appalachian Regional Advisory Committee (RAC) was conducted in the Appalachian areas of Kentucky, Tennessee, Virginia, and West Virginia by Insight Policy Research, Inc. (Wright, et al., 2016). The report submitted to the U.S. Department of Education Office of Elementary and Secondary Education in October 2016 indicated a significant shortage of highly qualified teachers in rural and high need areas. In addition to a lack of resources, many Appalachian rural schools are geographically isolated. This proves to be problematic in attracting and retaining highly qualified teachers in these school districts. There is a significant gap in the experience and educational attainment in teacher distribution based on geographical location and family incomes, as well. In many rural low-
income areas, not only were qualified teachers not available but a high teacher turnover rate appeared to be the norm. The lack of qualified educators caused an unfair distribution of effective teachers for these high-poverty, isolated school systems. Wright, et al., (2016) said that stakeholders in these areas were “concerned about widening achievement gaps between students of different races/ethnicities and economic backgrounds and finding ways to support the lowest performing schools”.

Wright, et al., further reported that even though the Appalachian region is diverse in its geographic location and socioeconomic makeup most of the school districts in Appalachia are found in small towns and rural areas. Appalachian schools have a higher proportion of Title I schools than the national average, a higher proportion of children living below the poverty level, and a higher proportion of students receiving free and reduced-price lunches daily than the national average. The rural nature of the Appalachian area and the ever-changing economy has affected the distribution of high quality teachers as well as affecting equity in educational achievement and preparing students to be successful in college and being ready to successfully enter the job market.

Finally, a literature review was conducted to find out ways to meet the needs of beginning teachers in schools in the rural Appalachian region.

**Interventions for Beginning Teachers in Appalachia**

A common concern for beginning teachers was competitive salaries. New teachers across the board noted the problem with salary inequity. Teachers chose better paying school systems over lower paying ones (Bland, et al., 2014; Dillon, 2011; Goldberg & Proctor, n.d.; Ingersoll & Smith, 2003).
In the Appalachian region of Tennessee, pay inequality was addressed by the Basic Education Program (BEP). The BEP was originally enacted in 1992 in response to a successful legal challenge by many of the state’s small school systems. The small school systems argued that the state’s funding system, at that time, did not provide equal educational opportunities to the students in these areas (BEP Enhancement Act, 2016; TN Small Schools Systems v. McWherter, 2013). The court case was decided on October 8, 2002 in favor of the small school systems in Tennessee. Tatter (2014) found that the disparities in teacher pay in Tennessee are once again widening.

To help offset the salary inequity problem in Tennessee, the Tennessee General Assembly unanimously passed the Basic Education Act in April 2016. In the state of Tennessee, Governor Haslam proposed to spend over $200 million in new money on education. About $60 million was set aside for growth of the Basic Education Program (BEP) and $100 million for teacher pay (Spears, 2017). One of the priorities identified by the BEP Review Committee was commitment to teacher compensation. This legislation promised to strengthen the funding formula for K-12 education in Tennessee. In part, it will “significantly” improve teacher salaries and will better serve “high need student populations” (Haslam’s BEP Enhancement, 2016). Teachers in rural Appalachian areas tend to take home a lower salary that their counterparts in other in more affluent areas. Tatter (2014) thought that the BEP funds would help the situation and that more teachers will decide to teach and stay in these Appalachian areas.

Tennessee is not the only state in which schools have brought lawsuits against the state for adequate funding. USA Today reported in 2014 that litigation was pending against eleven states because of “inadequate or inequitable school funding” (Lu, 2014).
The Appalachia Regional Advisory Committee members identified five needs as the top five priorities in education in Appalachia. Ranked in average order of priority by the committee members they are “preparing students to be college and career ready, supporting the lowest performing schools and closing achievement gaps, developing and ensuring equitable distribution of highly effective teachers and leaders, improving access to early childhood education and engaging families, and improving assessment and accountability systems” (Wright, et al., 2016).

Feiman-Nemser (2007) noted that it is in the standards that new teachers learn the professional practices of inquiry and the standards of accountability they need to be effective. Because national and state standards reflect visions of effective teaching they should be emphasized in conversations about planning instruction.

Martin’s (2012) research noted that quality teachers are crucial to the success of public schools. Therefore, teacher induction programs that meet the needs of beginning teachers are important for schools if they are to improve teacher retention and effectiveness. High-poverty school districts may improve recruitment and retention of excellent teachers by taking advantage of the Every Student Succeeds Act (ESSA). This federal government program provides additional resources for low-income districts to support them in attracting and retaining high-quality teachers in their schools (Making ESSA work, 2016).

**Summary**

Early research studies began to show that quality teacher induction programs do work (Smith & Ingersoll, 2004, Thompson, et al., 2005). They increased job satisfaction, efficacy, and retention of new teachers (Smith & Ingersoll, 2004). Since 2004 more research studies have produced the same results. The National Association of State Boards of Education (NASBE)
found that effective teaching practices, which were emphasized in comprehensive induction programs, made effective teachers. Effective teachers had the ability to raise student achievement by up to ten percentile points when compared to less effective teachers. The research discovered that comprehensive induction programs for first-year teachers reduced turnover rates by more than half (Sun, 2012). These results come from research conducted by the Schools and Staffing Survey. The Schools and Staffing Survey is a “nationally representative data source on educator staffing, researchers found that teachers who received comprehensive induction supports had a turnover rate of only 18 percent compared to 40 percent for new teachers who received no induction supports” (Sun, 2012, p. 6).

Fieman-Nemser (2007) found that new teachers who had participated in teacher induction programs had students who outperformed the students of their new teacher peers by an average of 0.25 standard deviation on the six standardized tests that were used in the study. This statistic remained accurate even after controlling for differences between schools. When the needs of new teachers were met it helped them better reach their full potential and caused them to stay in teaching. The results found the learning of all students was improved (Feiman-Nemser, 2007).

Smith and Ingersoll (2004) noted less teacher turnover in schools that had induction programs. They reported that some activities seemed to be more effective in retaining teachers than others. Carver (2003) found that among the more effective activities were having mentors from the same field, common planning time, collaboration with colleagues, and being part of an external network of teachers. Further research indicated that such programs effectively reflected induction program accomplishments, assistance, and support. The results of the studies were similar to those found in other research across subjects and levels of teaching and point to how important specific and active support was for beginning teachers (Martin, 2012; Savage, 2007).
Sun (2012) found that many educational leaders viewed teacher induction programs as simply a way to keep turnover among teachers to a minimum. However, the overall goal of an induction program should be to support new teachers so they will be more effective and make a smooth transition into the classroom. As induction programs help teachers improve their teaching practices they became more focused on how to improve instruction. Another benefit of the induction program was that it lowered teacher turnover by more than half for first-year teachers (Sun, 2012).

Smith, C. (2016) maintained that the impact of poorly trained teachers on student performance was more significant than the number of teachers who left the profession. Therefore, induction programs must concentrate on teacher performance if they wish to be relevant to the experiences of the new teachers (Smith, C., 2016).

Martin (2012) said that for teachers to do their jobs well, they need supportive school environments where they are valued, trusted, and allowed to collaborate in order to discover ways to improve instruction. New teachers needed to feel like they were a valued part of the school system and to feel a sense of belonging. Wong (2004) likewise stated that teachers wanted and needed to belong.

Aguilar, Goldwasser, & Tank-Crestetto (2011) said that for an induction program to be successful academic coaches must ensure confidentiality and meticulously keep their word. There must be a trust relationship. As trust is built, an academic coach can begin to focus on “instructional leadership, professional learning communities, shared leadership, and quality teaching” (p.3). Trach (2014) found that successful teacher induction programs will only succeed when new teachers feel safe and supported and Danielson (2007) said that academic coaches must collaborate with others and respect their opinions.
Fulton, et al., (2005) indicated that another goal of teacher induction programs should be to retain effective teachers in the classroom and in the school district. One way to accomplish this goal is to help educational leaders be aware that even though mentoring is a useful part of induction it is only one element of the total induction experience. Martin (2012) opined that mutual commitment was crucial to a successful mentoring experience. She also noted that the more hours spent with guidance from academic coaches and experienced mentor teachers led beginning teachers to show higher student achievement gains when compared with other teachers who spent less time with an academic coach or mentor.


Rowley (1999) found that academic coaches and mentor teachers must be accepting of the beginning teachers as they develop professionally. Coaches should not be judgmental of what they perceive as shortcomings. A good academic coach or mentor will recognize that sometimes a novice teacher will seem “poorly prepared, overconfident, naïve, or defensive” in their experienced eye. Instead of viewing these characteristics as fatal flaws, a good coach/mentor will “view these traits as challenges to overcome” as they help these new teachers succeed. In the same ways that good teachers adjust their teaching and communications that allows them to meet the needs of each student good academic coaches and mentors fine-tune their communication skills to meet the needs of each novice teacher. To make these adjustments, good academic coaches and mentors must understand their communication styles and be willing to show objectivity as they observe the performance of beginning teachers (Rowley, 1999).
Savage (2007) found that, from beginning teachers’ opinions of their induction program experiences a full 96% gave credit to other teachers with making them feel like part of the school community (Savage, 2007).

Beginning teachers’ perceptions of their induction program experiences showed that 69% of the new teachers who responded to Savage’s 2007 survey indicated the induction program activities were effective. The study revealed, from the group who participated in the study, that induction programs were sufficient in helping new teachers be successful during the first years of teaching (Savage, 2007).

Gray and Taie (2015) said that “recruiting and retaining excellent teachers is critically important for the success of future generations…especially for those living in underserved communities” (Gray and Taie, 2015). Stansbury and Zimmerman (2000) noted that the challenge of teacher induction programs is to give the new teachers the kinds of support they need that will encourage them to remain in the profession and develop into the kinds of teachers who are able to teach to today’s high standards. It is beneficial to help new teachers apply the theoretical knowledge they gained in college to the complexity of real-life teaching. Many new teachers had excellent pre-service training and wonderful student teaching experiences, but they remain limited in meeting the challenges a new teacher faces (Stansbury & Zimmerman, 2000). Bland, et al., (2014) and Thompson, et al., (2005) recognized that induction programs for new teachers have been recognized as a significant means to encourage retention of quality teachers and to enhance student achievement.
Chapter 3

Research Methodology

The research question for this study is whether teachers who participated in the Teacher Induction Program (TIP) in a small rural Appalachian school district in East Tennessee had higher scores on Tennessee Educator Acceleration Model (TEAM) Level of Effectiveness (LOE) evaluation scores than those teachers who did not participate in the teacher induction program. Chapter Three describes the population, sample, and provides a description of the instruments used in this study. This chapter also contains research procedures and identifies data analysis methods that serve to answer the research question.

Population and Sample

The treatment sample for this study was selected using convenience sampling. A convenience sampling is chosen “based on availability, time, location, or ease of access” (Ary, et al., 2016, Jacobs, Sorensen, & Walker, D. 2013, p. 674). The population included teachers from a small rural Appalachian area in East Tennessee who participated in a teacher induction program and teachers from the same small rural Appalachian area in East Tennessee who did not participate in a teacher induction program.

Individuals from each group were matched for as many similarities as possible including grade taught, subject taught, school to which they were assigned. The age and sex of the teachers were considered. The control sample teacher selection process was a dependent sample because the study identified teachers who were matched on several variables. “Two samples are dependent (or consist of matched pairs) if the members of one sample can be used to determine the members of the other sample” (Triola, 2006, p. 469). The teacher’s TEAM evaluation LOE scores were compared with their matched peer to determine if the teacher induction program
made a difference in the novice teacher’s evaluation scores. Teachers were matched according to similarities following IRB approval in January 2018.

**Research Design**

In order to address the research question, a quantitative study was conducted of the impact of a teacher induction program on the evaluation scores of beginning teachers who participated in the induction program compared to beginning teachers who did not participate in a teacher induction program. Quantitative research is based on research that “gathers numeric data through controlled procedures and analyses to answer predetermined questions or test hypotheses” (Ary, et al., 2014, p. 681).

Certain assumptions are inherent in quantitative research. Underlying quantitative research is *positivism*, “a philosophy of research characterized by objective inquiry based on measurable variables, believing that science should be primarily concerned with the explanation and the prediction of observable events” (Ary, et al., 2014). However, since the middle of the 20th century there has been a shift away from positivism to *post-positivism*. According to Trochim (2006) “post-positivism is a wholesale rejection of the central tenets of positivism. A post-positivist might begin by recognizing that the way scientists think and work and the way we think in our everyday life are not distinctly different. Scientific reasoning and common-sense reasoning are essentially the same process. There is no difference in kind between the two, only a difference in degree. Scientists, for example, follow specific procedures to assure that observations are verifiable, accurate and consistent”. Post-positivists believe that we are all biased in some ways and that our best hope of objectivity can only be achieved when researchers criticize each other and the theories that survive “have adaptive value and are probably as close as our species can come to being objective and understanding reality” (Trochim, 2006).
Description of Instrument

Teacher effectiveness was determined by teacher evaluation scores on the TEAM Evaluation Rubric (Tennessee educator acceleration model, 2013). The validity and reliability of the TEAM evaluation for accountability and improvement depend on having consistent evidence about teacher performance (Teacher and administrator evaluation in Tennessee, 2016). In the case of this study, a pragmatic approach was employed in which the researcher assumed the data collected would lead to confirmation or disconfirmation of the hypothesis. In this study, the TEAM evaluation rubric was a proxy measure which is commonly used when “direct measures of the outcome are unobservable and/or unavailable” (Proxy measures, n.d.). The evaluation tool in this study was the standards within the TEAM rubric that were “developed through a collaboration between the Tennessee Department of Education and the National Institute for Excellence in Teaching (NIET). These standards are based on education psychology and cognitive science research focusing on learning and instruction, as well as an extensive review of publications from national and state teacher standards organizations” (Tennessee Educator Acceleration Model, 2013, p. 1).

“The criteria for the NIET teaching standards came from both experimental design studies and correlation studies that used valid and reliable achievement tests in classrooms” (Tennessee Educator Acceleration Model, 2013, p. 1). At the time of the study, the TEAM evaluation was the most effective evaluation tool available.

The TEAM evaluations were used because the Tennessee Value-Added Assessment System (TVAAS) scores measure the impact schools and teachers have on their students’ academic progress. TVAAS is a tool that measures how much student grow in a year (Tennessee Department of Education: TEAM, n.d.). TEAM evaluations also evaluated teachers on how they
performed on the domains of instruction, planning, environment, and professionalism in multiple evaluations that are included in the TEAM evaluations with emphasis on the teachers Level of Effectiveness (LOE) scores.

For the comparison of the means of paired matches, a t-test for dependent samples was used. According to Laerd Statistics, “the dependent t-test (also called the paired t-test or paired-samples t-test) compares the means of two related groups to determine whether there is a statistically significant difference between these means” (Dependent t-test for paired samples, n.d.).

This study compared the TEAM evaluation scores in instruction, environment, planning, and professionalism during the novice teacher’s first year in a rural Appalachian school system. These teachers attended a Teacher Induction Program provided by the school system with novice first year teachers in the same school district who did not participate in the Teacher Induction Program. Evaluation scores provided to the researcher via the TEAM evaluations scores were analyzed using dependent samples t-test to determine whether the difference between the two groups of teachers was significantly different or if the difference occurred simply by chance.

The evaluation tool for this study used the standards set forth by the TEAM rubric. The TEAM rubric was developed by the Tennessee Department of Education in conjunction with the National Institute for Excellence in Teaching (NIET). The standards are based on the “psychology and cognitive science research” that focused on both teacher instruction and student learning. The TEAM rubric was also constructed from a comprehensive review of research from “national and state standards organizations” (Tennessee Educator Acceleration Model, 2013).

As a result of a study of previous research on how effective a teacher induction program could be, a high-poverty school district in East Tennessee, began a comprehensive induction
program to help meet the needs of new teachers which it believed would help novice teachers be more effective teachers and that the program would result in higher Level of Effectiveness (LOE) scores on their Tennessee Educator Acceleration Model (TEAM) evaluation.

**Setting**

The school system examined in this study was comprised of eight schools including the Career and Technical Center and serves about 3,000 students. Of these schools, three were located in small communities and included grades PreK through 12th grade. One school had separate facilities that consisted of PreK through fifth grades in the elementary; grades 6 through 8 made up the middle school; and a separate high school housed grades nine through 12. One school in the district contained PreK through 8th grade and served as a feeder school for two high schools in the county. The Career and Technical Center was centrally located and served all the high schools in the county. The teacher’s TEAM evaluation LOE scores were compared with their matched peer to determine if the teacher induction program made a difference in the novice teacher’s evaluation scores.

**Research Procedures and Time Period of the Study**

Data for this study encompassed the time period between 2011 and 2017 using ex post facto data collection. Data for this research were on file and available to the researcher at the school district’s central office. Ex post facto research is “a type of research that attempts to determine the causes for, or the consequences of, differences that already exist in groups of individuals” (Ary, et al., 2014, p. 676).

The goals of the induction program in the school district where the research takes place were to acclimate new employees to the policies and procedures of the school district, enhance and expand teacher effectiveness inside the classroom to improve student achievement, build a
community of teachers who will work as a team to solve problems and offer mutual support, provide resources, a time and place to ask questions, solve problems, and voice concerns, and provide ongoing support and training, make new teachers feel welcome and a valued part of the school system, identify what will help new teachers be effective and successful, retain effective and successful teachers, decide content and how long and when the induction program should be, determine the effectiveness of teachers to improve student achievement, help new teachers improve student achievement by using data, aid new teachers in discovering ways to effect collaboration, allow new teachers to begin professional development, explain learning communities and how they work, help new teachers become part of the learning community, teach about district and school policies, procedures, and routines, work with principals and central office administrators, teach ways to organize the classroom, provide a support system for the new teachers, encourage new teachers to go to their mentors and colleagues for help, aid teachers in applying the national and state standards, and teach how to use the learning standards to guide instruction.

Data Analysis

After the researcher was granted approval from the IRB board, and the school system involved, data from the TEAM LOE evaluations were organized and entered into a GraphPad computer application program. The GraphPad app did the calculations for the statistical study and produced the results. Individuals from each group were matched for as many similarities as was possible including grade taught, subject taught, school to which they were assigned, age, and sex. Each teacher’s TEAM LOE evaluation score was compared with their matched peer to determine if the teacher induction program made a difference in the novice teacher’s evaluation scores.
The “n” for each group was the total number of first-year teachers who participated in a teacher induction program and a matched first-year teacher who did not participate in the teacher induction program. N equaled sixty-two and was distributed as two groups of thirty-one pairs.

The only connection between the treatment group and the control group was that they were first-year teachers in the same school system. Each pair of teachers was carefully matched to be as equal as possible to ensure optimal similarity among pairs.

For ethical reasons, each pair of teachers for consideration was assigned a number to provide anonymity.

**Summary**

This study consisted of sixty-two new teachers who participated in an induction program between 2011-2017 in one rural East Tennessee school district. Each new teacher was paired with a corresponding teacher who was already in the school district and had previous evaluation scores. TEAM LOE evaluation scores for each teacher were compared to determine if the teacher induction program teachers were more effective than their peer who did not participate in the program.
CHAPTER 4

Results of the Data Analysis

The purpose of this study was to determine whether a teacher induction program in a small, rural Appalachian school district helped first year teachers be more effective teachers as determined by the Tennessee Educator Acceleration Model (TEAM) Level of Effectiveness (LOE) scores. Researchers found that, with the demands new teachers face, a strong support system is necessary (Fry, 2007; Martin, 2012; Ingersoll & Smith, 2004; Smith, C., 2016). Further studies found that there is a link between teacher effectiveness and student learning and achievement (Bennett, 2012; Goe, Bell, & Little, 2008; Tucker & Strong, 2005; and Wong & Wong, 2009). This preponderance of evidence from research studies accepted that teacher induction programs helped novice teachers learn the processes and procedures that caused them to be more effective in their classrooms.

This study was conducted to compare the findings from previous research and led to the finding the answer to the research question. The research question was what is the impact of a teacher induction program on the Tennessee Educator Acceleration Model (TEAM) Level of Effectiveness (LOE) scores compared with beginning teachers who did not participate in a teacher induction program? The null hypothesis was that there is no statistically significant difference between teacher TEAM LOE scores of first year teachers that participated in a teacher induction program and TEAM LOE scores of those who did not participate in the program.

Chapter Four discusses the population and sample used in this study, explains how matching pairs were selected, describes the TEAM LOE evaluation rubric and why this criterion was used to evaluate teacher effectiveness. Chapter Four also includes a description of the
evaluation instrument, the collection of data, the time period of the study, research procedures, how the data were analyzed to test the hypothesis, and provides results of the study.

Results Regarding the Hypothesis

Population and Sample

This study consisted of a convenience sampling of teachers in a small, rural Appalachian school district in East Tennessee. The population included teachers who participated in a Teacher Induction Program (TIP). Teachers in the study were matched as pairs with similar teachers who did not participate in TIP. Participants included a total of 62 teachers comprised of 31 matching pairs.

Selection of Matching Pairs

Teachers were matched for as many similarities as possible including age, sex, grade taught, subject taught, and the school to which they were assigned. Among the participants, 20 teachers were male and 42 were female. The ages of the teachers ranged from pairs in their early twenties when they began teaching to a pair that consisted on a teacher who started teaching in her late fifties paired with a teacher who was in her early sixties when she started her teaching career. The age range was considered a match when there was five years or less difference in the ages of the teachers. All teachers in the study were Caucasian due to the demographics of the school district. According to the 2016 United States Census Bureau (2016) the county used for this study was comprised of 94.3% white, 3.5 percent black or African American, 0.5 percent were American Indian and Alaska native, 0.3% were Asian, and 1.4% were two or more races (U.S. Census Bureau, 2016). Teacher matching pairs are shown in Appendix B.

All participants taught in the same school district. Of these, 58% were matched by sex with the majority being female. Of the novice teachers, 12 pairs were within a five year or less
age range when they began their first year of teaching. Of the matched pairs, 14 taught in the same school and 17 pairs, while they taught in the same district, did not teach in the same school building. All thirty-one pairs were matched on whether they taught in the elementary grades, middle school, or high school. Eighty-four percent of the teacher pairs taught the same subject. Of the teacher matches who had fewer similarities, it may be noted that, even with their differences they may have been scored by the same evaluators and, in some instances, may have been teaching the same student group as their matching peer, but teaching a different subject.

**Description of the Instrument and Collection of Data**

The TEAM LOE evaluation scores were used for making comparisons of the evaluation scores. The use of the TEAM LOE evaluation scores were used as the evaluation tool for this study because this was the instrument being used in the schools in Tennessee during the years of this study. Since the same evaluation tool was used for comparison it led to more reliable and valid comparisons.

TEAM evaluations went through several revisions during the time of this study. In 2011 the Tennessee State Board of Education put the TEAM evaluations process into effect. Since that time, the evaluation has endured many questions, been changed, and been challenged in court. In 2015 the Tennessee Education Association (TEA) filed a lawsuit on behalf of two teachers asserting the evaluation system was unfair to teacher who teach subjects not tested by the state. Such classes included art and music teachers and well as physical education teachers and other groups of teachers. If a teacher was teaching a non-tested subject, they were required to use a school-wide score. One teacher represented in the TEA lawsuit said it cost her eligibility for tenure because it caused her to have a lower evaluation score. The other teacher represented by TEA in the lawsuit claimed it cost her a bonus (Balakit, 2015). This was the third lawsuit filed by
TEA within a year concerning “the use of state assessment scores in high-stakes decisions, such as bonuses, for state educators” (Balakit, 2015, p. 1). Prior to these lawsuits TEA had filed lawsuits challenging the state on behalf of teachers who taught state-tested subjects challenging the methodology of value-added (TVAAS) test scores. In 2014, the Tennessee General Assembly severed the ties between TVAAS and teacher licensure.

Another issue with TEAM evaluations has been confusion from year to year on how much weight each component is given. In the Tennessee Department of Education’s year two implementation report, changes were made to the school-wide growth scores. “The General Assembly unanimously passed legislation, on the TDOE’s recommendation, changing the weighting of school-wide TVAAS from 35% of a teacher’s evaluation score to 25%. This change was applied to results from the 2012-2013 school year (Teacher evaluation, 2013). The new statute was also changed to include students with disabilities in the value-added scores.

In 2014-2015 there were more changes. Due to disagreement on the 15% achievement measure selection process. Prior to 2014, evaluators had the final say in what achievement measure was used. The Legislators voted that, going forward, the person being evaluated would have the final say in the selection. The problem of non-tested grades and subjects continued to be problematic (Teacher evaluation, 2014).

Even more changes were made to the 2016-2017 evaluation options for teachers. A phase in of the TN-Ready scores was put into place in 2015 (TEAM teacher…handbook, 2017). TN-Ready is an achievement test that shows student progress and compares students to others who took the TNReady test (TCOE, n.d.). TN-Ready scores are aligned with state standards and counted 10% of a teacher’s evaluation in 2016-2017, raised to 20% in 2017-2018, and will top
out at 35% in 2018-2019. However, in 2015-2016, a teacher could opt not to use the TN-Ready score if it did not benefit their evaluation score (TEAM teacher…handbook, 2017).

Currently, the largest part (75%) of the LOE score is qualitative. This qualitative score is made up of the TEAM observations that, for classroom teachers, include an instructional component comprised of rating of the objectives of the lesson, motivating students, presenting instructional content, lesson structure and pacing, appropriate use of activities and materials, questioning competencies, giving academic feedback, grouping students, teacher content knowledge, thinking, and problem solving. In addition to the instructional component there is a planning section. This section includes evaluation scores on instructional plans, student work, and assessment. The final part of the evaluation is environment. This section includes expectations managing student behavior, environment, and respectful culture.

There is a similar evaluation procedure for media specialists which were included in this study. For the most part, the evaluation is the same. The media specialist’s TEAM observations include an instruction component comprised of ratings in standards and objectives, motivating students, presenting instructional content, lesson structure and pacing, activities and materials, Library Media Specialist (LMS) content knowledge, LMS knowledge of students, thinking, and problem solving. The next component for media specialists is planning services and includes media center management, media center resources, and media center collaboration. The final piece of the evaluation for media specialists is environment. The environment component is exactly the same as the environment component for classroom teachers and includes expectations, managing student behavior, environment, and respectful culture (TEAM-tn.org, 2016).
The LOE scores include a 15% achievement measure component that shows students’ academic growth. School districts have some discretion in determining which academic growth measures they will use. The ideal situation is to have the achievement measurement as closely aligned to the teaching assignment as possible. The guidelines state that the assessments be available for use with a broad audience; that they are “developed for state or national use” (TEAM-tn.org, 2016). A stipulation when choosing an assessment measurement is that it cannot be scored at the local level. School districts also have discretion “with setting their scale scores (score range)” (TEAM-tn.org, 2016). High school graduation rate may also be used in the LOE score. As with the previous guidelines, the graduation rate scaling may be set at the local level.

The final 10% of the LOE scores for new teachers include a TN-Ready score. TN-Ready is part of the Tennessee Comprehensive Assessment Program (TCAP) which is intended to measure student understanding (TNReady-TN.gov, n.d.).

**Time Period of the Study**

This study included the years 2011-2017 using ex-post facto data collection. New teachers from 2011-2015 were included in data for the treatment group that participated in the TIP. The program ended in 2015, so 2015-2017 data was collected for the control group. Only TEAM LOE scores were used for this study. TEAM evaluations first started being conducted in 2011 thus excluding beginning teachers prior to 2011 and explains why the control group scores were subsequent to the treatment group scores. Data for both groups were on file and available on the Tennessee Department of Education website (http://tdoe.tncompass.org).

**Research Procedures**
The LOE scores for educators in this study were used to compare the control group and the treatment group. The scores were gathered from the TEAM LOE evaluation results are shown in Appendix C.

**How the Data were Analyzed to Test the Hypothesis**

A dependent t-test was used to compare the means of the two groups to determine whether there is a “statistically significant difference in the means” (Dependent t-test, n.d.). A t-test is used when seeking a numerical value and then comparing the means of the two groups. A t-test for dependent samples is also known as “correlated, matched, or paired t test. The measure to be analyzed by the dependent t test is the mean difference between the paired scores” (Ary, et al., 2014).

In this study the statistical information was entered in a GraphPad calculator. GraphPad calculated the statistical data. Data copied from GraphPad is found in Appendix D.

From the calculations from GraphPad it can be noted that the control group was labeled as Group One and the treatment group was labeled Group Two. N=62 with a distribution of thirty-one teachers in the control group and the matching teachers making up the other thirty-one in the treatment group. The mean of the control group was 3.77 and for the treatment group the mean was 3.35. Since \( p \) was <0.05, at 0.0455, one can state that there was a significant statistical difference between the means of the two groups. Therefore, the hypothesis was accepted. The null hypothesis was rejected.

The results of this study were unexpected. It was hypothesized that the treatment group would have more effective LOE scores on the TEAM evaluation than the control group.

**Summary**
The purpose of this study was to determine whether a teacher induction program in a small, rural Appalachian school district in East Tennessee helped first year teachers be more effective in the classroom as determined by their TEAM LOE evaluation scores.

Research studies showed that, for most novice teachers, the first few years in a classroom were the most difficult ones for new teachers and caused many new teachers to leave the profession (Gray & Taie, 2015; Ingersoll & Smith, 2003; Ingwalson & Thompson, 2007; Martin 2012). Problems are even more prevalent in rural areas (Dillon, 2011; Distressed counties, n.d.; ESSA, n.d.; Gray & Taie, 2015; Hanford, 2017; Wright, Cunningham, & Stangle, 2016). While overall educational attainment rates in the Appalachia region have improved over the past fifty years, Appalachia continues to be behind the national average. Fifty-seven percent of Americans have some education beyond high school but only 48% of Appalachians reach that educational level (Investing in Appalachia’s future, n.d.). The school district being studied had been listed as an “at risk” county in the Appalachia Regional Commission report for 2017 meaning they ranked in the lowest 10% to 25% of counties in the United States. The county was ranked as being a “distressed” county in 2018 meaning they now rank between the lowest 10 - 25 percent of counties in the United States (Distressed designation, n.d.) This proved to be a greater incentive to study of this county. They way out of poverty for many of the students is an education.

This study matched teachers who had been through the TIP and those who had not based on as many similarities as possible. Age, sex, grade, subject, and school assignment we all taken into account when making the matched pairs.

An independent t-test was utilized to show the effectiveness of a teacher induction program on teachers beginning their careers. The independent t-test indicated that there was a
statistically significance between the TEAM evaluation Level of Effectiveness (LOE) scores. Interestingly, the control group scored higher than the treatment group.

The mean score for the control group was higher than the mean score for the treatment group. Also noted was less variance in the treatment group than in the control group. Thus, the control group had a higher mean score and were more consistent in their scores than the treatment group. The reason for this finding is unclear and lends itself to further study to determine the cause. The possible reasons for this unusual finding we be discussed in Chapter 5.
CHAPTER 5
Conclusions, Implications, and Recommendations

The goal of this study was to determine whether a teacher induction program in a small, rural Appalachian school district helped first year teachers be more effective teachers as determined by their TEAM LOE evaluation scores. Researchers found that teacher induction programs provided valuable help to novice teachers and assisted them in becoming more effective educators (Martin, 2012; Ingersoll and Smith, 2004, Smith, C., 2016; Fry, 2007). Additionally, researchers found that there is a link between teacher effectiveness and student learning and achievement which is the major goal of education (Bennett, 2012; Goe, Bell, & Little, 2008; Tucker & Strong, 2005; Wong & Wong, 2009).

Review of Previous Research

A systematic review of research studies indicated that many teachers leave in their first year of teaching. High numbers of teacher attrition were reported by Smith and Ingersoll (2004) and Gray and Taie (2015). A more recent study by Sutcher, Darling-Hammond, and Carver-Thomas (2016) found that the teacher attrition rate remains high, at 8% each year.

The impact of teacher attrition was found to have a negative effect on student achievement in both math and English/Language Arts with low income students bearing the brunt of this turnover (Meyer, 2013; Ronfeldt, et al., 2013). Teachers in high-poverty schools left more often than teachers in suburbia causing the high-poverty schools to have more inexperienced teachers (Fulton, Yoon, & Lee, 2005, Guin, 2004; Meyer, 2013; Podolsky, et al, 2016).
Teachers leave the profession for many reasons with low salaries being the most often reason cited. Salaries are lower for teacher than for other college graduates even after making allowances for a shorter work year for teachers (Podolsky, et al., 2016).

In addition to low salaries, teachers cited poor working conditions (Ingersoll, 2001; Ingersoll & Smith, 2003; Podolsky, et al., 2016; Wong & Wong, 2009). Novice teachers were surprised by the number of responsibilities they were expected to do (Ingersoll, 2001; Fry, 2007). New teachers struggled with classroom management (Goodwin, 2012). They felt particularly burdened when dealing with problematic students. Novice teachers were concerned with diversity in their classrooms, both by ethnicity and physical ability (Stansbury & Zimmerman, 2000). Working with colleagues proved to be a concern for new teachers, as well. They sometimes felt isolated from their colleagues (Fry, 2007). New teachers wanted time to observe veteran teachers to help them develop their skills under the guidance of the more experienced teachers (Protheroe, 2006). Other novice teachers mentioned a lack of planning time as a problem (Ingersoll, 2001; Thompson, Paek, Goe, & Ponte, 2005). Establishing good relationships with parents of their students proved to be difficult for beginning teachers (Stansbury & Zimmerman, 2000; Wong & Wong, 2009). Beginning teachers left the profession because of dissatisfaction at what they perceived to be weak or inadequate school leadership. The new teachers expected to receive the support they needed and if that did not happen, they were more likely to leave (Thompson, et al., 2005). In an effort to address these issues, induction programs were set up to assist novice teachers with best practices and sustain employment.

**School Districts Respond**

In response to the concerns of new teachers, school districts began to realize, that to attract more effective teachers, higher pay and positive work environments were needed
(Liepman, 2017). Sometimes new teachers are assigned the most undesirable classes and tasks which leads to their dissatisfaction (Feiman-Nemser, 2007). However, when administrators avoided this practice it gave the new teachers more time to concentrate on improving their teaching skills (Carver, 2003).

New teachers found it was especially helpful when they felt free to communicate with their principals about student behavior issues and how to effectively address them. Principals who maintained order in the building and were actively involved in maintaining discipline allowed new teachers more time to teach, instead of spending time managing student behavior (Carver, 2003; Ingersoll, 2001; Ingersoll & Smith, 2003). Protheroe (2016) said that one of the most important jobs of the principal is to let the new teachers know what is expected of them. Carver (2003) noted that beginning teachers appreciated school leaders who acknowledged and appreciated their efforts and who communicated their support. When school leaders had high expectations of both students and teachers, they were more effective in assisting the novice teachers.

When helping new teachers deal with diversity in their classrooms, academic coaches should help new teachers gain a willingness to help all children feel a sense of belonging and acceptance. The better teachers can accomplish this, the closer they will be to forming bonds with their students, their student’s parents, and with other teachers (Gonzales-Mean & Pulido-Tobiasssen, 1999).

Colleagues who allowed new teachers to become part of the educational process and who showed encouragement, professionalism, and success made the new teachers feel more part of a team that worked together, thus giving them a sense of empowerment (Carver, 2003; Habegger, 2008).
Are Teacher Induction Programs the Answer?

As previously discussed, teacher induction programs have been shown to help successfully meet the needs of beginning teachers. However, the success of the teacher induction program depended on what the program was comprised of. The most effective induction programs provided comprehensive services for novice teachers. That included more than simply pairing a new teacher with a veteran teacher. According to Sun (2012), comprehensive teacher induction programs should include “Multi-year support for new teachers for at least two years, high-quality mentoring utilizing carefully selected and well-prepared mentors, regularly scheduled common planning time with other teachers, ongoing professional development, and standards-based evaluation of new teachers throughout the process” (Sun, 2012, p. 5). Researchers estimated that not even one percent of new teachers received this comprehensive induction. The overall goal of an induction program should be to support new teachers so they will be effective and make a smooth transition into the classroom.

Fieman-Nemser (2007) discovered that new teachers who participated in teacher induction programs had students who outperformed the students of their new teacher peers by an average of 0.25 standard deviation on the six standardized tests that were used in the study. The 0.25 standard deviation remained accurate even after controlling for the differences between schools. When the needs of the new teachers were met the were more inclined to stay in the profession. Additionally, the results found that the learning of all students improved.

The Relation of Ericsson’s Expertise Theory on this Study

This study draws on Ericsson’s expertise theory which promotes a practice wherein a person learns from quality curriculum combined with the efforts of skilled coaches. This theory also espouses the idea that deliberate practice will aid in gaining expert performance. In this
vein, academic coaches were hired to work with beginning teachers in a program called the “Teacher Induction Program” (TIP). The goals of the induction program were to acclimate new employees to the policies and procedures of the school district, to enhance and expand teacher effectiveness inside the classroom to improve student achievement, to build a community of teachers who will work as a team to solve problems and offer mutual support, to provide resources, a time and place to ask questions, solve problems, and voice concerns, and to provide ongoing support and training. The academic coaches endeavored to provide the novice teachers with a coordinated program based on research, to help the new teacher clearly set goals, leading them to benefit from learning research-based ways to enhance their teaching practices, to gain needed support from experienced professionals, and to put into practice what they learned from quality feedback. With the intent of raising teacher effective scores and student achievement, the academic coaches incorporated the research findings into TIP.

**Expectations of this Study**

The treatment group for the TIP was in place from 2011-2014. The length of the program was based on the year grant money was received. Since the TEAM evaluations did not begin until 2011 there were no data with which to compare a treatment group therefore necessitating the data from the control group be gathered later than the data from the treatment group. The data from the TEAM evaluations from the control group were gathered from the years 2014-2017. It was expected from the research and construct of the induction program that the novice teachers who participated in the induction program would high higher levels of effectiveness scores on their evaluations. However, this was not the case. In this study, the TEAM LOE scores of the control group were statistically significantly higher than the treatment group.
Since the results of this study were not what was expected, and the opposite proved to be true, it became necessary to try to find out why.

Results of this Study in Relation to the Review of Literature

The literature review had given high expectations for a teacher induction program. A preponderance of a review of research led me to think, that if we added the components of what had been proven to be effective in helping new teachers be more effective that the results of the study would be positive. The common components of successful induction programs such as multi-year assistance (Sun, 2012; Wong, 2004), modeling lessons, making regular classroom visits, helping with classroom management (Carver, 2003; Goodwin, 2012; Ingersoll, 2001; Ingersoll & Smith, 2003; Marzano & Marzano, 2003), aiding new teachers in establishing positive relationships with their students, the parents of their students (Stansbury & Zimmerman, 2000; Wong & Wong, 2009), their colleagues (Ingersoll, 2001; Thompson, Paek, Goe, & Ponte, 2005), and administrative personnel (Goldbert & Proctor, n.d.; Ingersoll & Smith, 2003; Protheroe, 2006) were all included in the induction program. Professional development (Sun, 2012) was scheduled monthly to allow the novice teachers to become a cohesive group and to help each other problem-solve and give them a time to debrief, discuss any concerns, and time to interact with each other to build support and commitment (Ingersoll, 2001; Thompson, Paek, Goe, & Ponte, 2005). The program was led by experienced academic coaches who had been shown to be the most effective teachers in the district and who had high student achievement scores from their years in the classroom. The academic coaches, Director of Schools, and Curriculum and Instruction Supervisors endeavored to give new teachers common planning times with the veteran teachers and their peers in an effort to provide expertise from these professional learning communities. Academic coaches helped the beginning teachers through
monthly professional development meetings that were set up to address timely issues and to prepare the novice teachers to seemlessly fit into the professional development in-services set up by the district (Sun, 2012). Academic coaches focused attention on helping the beginning teachers make successful adjustments in their assigned schools, the district, and in the field of education, in general by addressing not only the general needs of the group but by offering individual assistance and advice.

Due to the fact that many of the ideas from professional literature were incorporated the researcher expected to find that the teachers in the TIP would have higher evaluation scores than their peers who had not participated in the program. It was surprising and disappointing to find that the treatment group had not seemed to benefit from the induction program. From the results of the study many questions were raised that lend themselves to further study and will be explored further in “Recommendations for Further Research”.

**Questions Arising from the Unexpected Results of this Study**

The first question I entertained was if the academic coaches spent enough time in each classroom. Smith, C. (2016) said that the greatest barrier to being an effective academic coach is the lack of time a coach is able to observe the novice teacher in the classroom and time to give feedback about the teaching session. The number of miles the academic coaches had to travel proved to be a problem in spending time in each school. According to the United States Census the rural area we covered encompassed 522 miles. There were three academic coaches covering this rural area made up of eight schools serving about 3,000 students. The sheer amount of territory covered proved to be a daunting task. The academic coaches were not able to be in each school as much as had been hoped. The data leads to the conclusion that the lack of time in the
classrooms was the most likely reason the treatment group scored higher than the control group. It was later discovered that this was probably not the most likely cause.

Another question that research leads to is whether the novice teachers could have been intimidated because the academic coaches were based at the Central Office. Did the academic coaches make it clear that their conversations and observations would be held in strictest confidence?

Trust and confidentiality go hand in hand. The early part of an coaching/mentoring program can be an intense and intimidating time for a new teacher. The first aspect of the relationship is to develop a relationship of trust. “Trust isn’t something that comes quickly or easily and instead required times and patience to build” (Scott, 2012). Trust is developed along with mutual respect, and the willingness to be vulnerable. Academic coaches/mentors can gain the trust of the new teachers by giving them a voice and by showing they are empathetic to the situation the new teachers find themselves in. Closely related to the question of building trust is the importance of holding conversations and observations in strictest confidence. Aguilar, Goldwasser, and Tank-Crestetto (2011) said that for an induction program to be successful academic coaches must ensure confidentiality and meticulously keep their word. As trust is built, an academic coach can begin to focus on “instructional leadership, professional learning communities, shared leadership, and quality teaching” (p.3). Trach (2014) found that successful teacher induction programs will only succeed when new teachers feel safe and supported. A qualitative study interviewing novice teachers to find out their experiences will need to be done to help answer this question.

The third question was to ask if the novice teachers in the treatment group had less aptitude for teaching than their peers? There was a limited number of teachers eligible for this
study and because a lack of access to either aptitude tests or grade point averages for the novice teachers so it was not possible to control this variable when making the matching pairs. This could account for some of the differences in level of efficiency scores (Ary, et al., 2014, p.287). A quantitative study would need to be done using aptitude test results or grade point averages to find the answer.

Were the results of this study an aberration? In an ex-post facto study such as this study, the variables involved are those the researcher does not directly manipulate (Ary, et al., 2014). Since independent variables could not be controlled, the study has less internal validity.

Is there increased quality and standardization in teacher preparation programs? According to Marta Aldrich in February 2018’s Chalkbeat three of Tennessee’s largest teacher training programs have shown improvement on the state report card. The University of Tennessee in Knoxville “became the first public university to achieve a top score under the State Board of Education’s new grading system” (Aldrich, 2018). Middle Tennessee State University and East Tennessee State University also saw improved scores. Most of Tennessee’s teacher training programs continued to have the same scores as they had the previous year. Mike Krause, executive director of the Tennessee Higher Education Commission told legislators that “it’s time to put traditional programs at public institutions under a microscope, especially since those colleges and universities produce 90 percent of the state’s new teachers” (Aldrich, 2018). One score in the evaluation included how “effective those teachers are in classrooms based on their evaluation, including state test scores that show student growth” (Aldrick, 2018). This corresponds with the data that was collected in this study.

Could there be a problem with one to five scoring range as opposed to a scale of one to ten that would cause a statistical difference? Bernstein (2017) founder of Waypoint Group, a
consultant group that works with business-to-business (B2B) to help companies “understand customer needs and prioritize action” (Waypoint, n.d.) noted his preference for a scoring range of one to ten as opposed to a scoring range of one to five. Bernstein (2017) opined that using a scale of 1-5 does not “yield sufficient diversity in the data.” Bernstein’s opinion lends itself to a discussion on perhaps making a change in the TEAM evaluation system. Perhaps a rating scale of 1-10 might be preferable to the 1-5 rating scale that exists at this time.

Another question arises that needs to be answered. Do we know for a certainty that teacher induction programs are effective? Based on a literature review a great preponderance of the research found that teacher induction programs are effective (Carver, 2003; Feiman-Nemser, 2007; Martin, 2012; Savage, 2007; Smith & Ingersoll, 2004; Sun, 2012; Thompson, et al., 2005). Researchers agreed that induction programs are beneficial for new teachers. Research concentrated on what should be included in induction programs that would most benefit new teachers (Aguilar, E., Goldwasser, D., & Tank-Crestetto, K., 2011; Carver, C., 2003; Feiman-Nemser, S., Schwille, S., Carver, C., Yusko, B., 1999; Feiman-Nemser, S., 2003; Feiman-Nemser, S., 2007; Fry, S., 2007; Ingersoll, R., & Smith, T., 2004; Martin, K., 2012; Podolsky, A., Kini, T., Bishop, J., & Darling-Hammond, L., 2016; Protheroe, N., 2006; Sun, 2012; Thompson, M., Paek, P., Goe, L., & Ponte, E., 2005; Wong, H., 2004; and Wong, H.K. & Wong, R.T., 2009).

Was the support from academic coaches and mentors not enough to help new teachers in small, rural Appalachian schools overcome the obstacles they face during their first years in the classroom? Chapter Two discussed reasons teachers left the field. The most commonly cited reason was low teacher salaries (Bland, Church, & Luo, 2014; Goldberg & Proctor, n.d.; Ingersoll, 2001; Ingersoll & Smith 2003; Podoksly et al., 2016), poor working conditions (Fry,
2007; Ingersoll, 2001; Ingersoll & Smith, 2003; Podolsky, et al., 2016; Weinstein, 1988; Wong & Wong, 2009, classroom management issues (Goodwin, 2012; Ingersoll, 2001; Ingersoll & Smith, 2003), dealing with diversity (Gonzales-Mena & Pulido-Tobiassen, 1999; Stansbury & Zimmerman, 2000), working with colleagues (Fry, 2007; Ingersoll & Smith, 2003; Martin 2012; Mirel & Goldin, 2012; Protheroe, 2006; Wong & Wong, 2009), a lack of planning time (Ingersoll, 2001; Thompson, Paek, Goe, & Ponte, 2005), long commute time (Could commute impact, 2015), relationships with parents (Stansbury & Zimmerman, 2000; Wong & Wong, 2009). These issues continue to be troublesome for novice teachers.

Implementation dip could be the reason for the results of the study. Implementation dips occur in “all successful schools” (Fullan, 2001, p.6). The implementation dip is a literal drop in performance when schools encounter changes that requires “new skills and new understandings” (Fullan, 2001, p. 6.)

Finally, have TEAM evaluations been around long enough that teachers are being trained in using this method in their college teacher preparation courses? TEAM evaluations began in 2011, the first year the teacher induction program was in place. It is pertinent to note that in 2014 a new policy was adopted by the Tennessee State Board of Education. Tennessee Educator Preparation Policy 5.504 stated that “all preparation programs must include training to support candidates’ understanding of a state approved educator evaluation framework. Programs are encouraged to employ state-approved evaluation tool for the purpose of evaluating candidates during clinical experiences” (Tennessee Educator Preparation Policy, 2014). It would have made sense for teaching institutions to use the TEAM evaluation tool because it was readily available and already being used to evaluate teachers. This could have given the control group an advantage over the treatment group because the control group could have had more study of and
practice in being evaluated using TEAM. This proved to be the most likely reason for the unexpected results of this study.

So, the new question becomes “What will cause successful, effective, and highly qualified teachers to teach and stay in the classrooms across rural Appalachia?

Implications of the Study

Through the literature review for this study, the research supports the idea that teacher induction programs benefit novice teachers. Induction programs help keep beginning teachers in the field of education and can even help them become more effective teachers; teachers whose students show achievement gains. Novice teachers identified ways in which they felt they were best helped by academic coaches/mentors. When educational leaders take the needs of the new teachers and meet those needs, the students, teachers, administrators, and the field of education benefit from having satisfied, effective teachers.

Based on previous research, the results of this study were not what was expected. However, it was found that it was likely that, having been taught how to use the TEAM evaluation components and being evaluated, using the TEAM evaluation components during their student-teaching experiences helped new teachers achieve better evaluation scores during the first year in the classroom.

Recommendations for Schools

School districts should continue to offer and refine teacher induction programs to best meet the needs of the beginning teachers. Schools should provide academic coaches or mentors for new teachers and give them time to meet and collaborate with each other and with veteran teachers. Novice teachers and veteran teacher should be given time to observe each other and discuss what was learned. The veteran teacher should offer constructive feedback to the novice.
Administrators need to be available to listen to novice teachers and offer their support and assistance. Principals need to provide safe working conditions and clean buildings. Principals should guard instruction time by having the fewest possible interruptions. Principals should take note of the situations of beginning teachers and assign them comparable, or easier, workloads until they feel comfortable in their assigned roles. Common planning time should be offered to teachers. As novice teachers learn the art and science of teaching, incorporate best practices in the classroom, and participate in professional development they will become successful and effective teachers who will be more likely to remain in education.

**Conclusion**

This study compared teacher effectiveness scores in a rural Appalachian setting of novice teachers who participated in a teacher induction program and their peers who had not. The study concluded that the control group scored higher than the treatment group. It was learned that, because the control group had pre-service experience with learning and practicing the components of the TEAM evaluation, they had an advantage as beginning teachers. The study also concluded that induction programs are valuable for novice teachers. However, there is room for improvement in what is included in the induction programs.

**Summary**

The study found that the teacher induction program in a rural Appalachian school district did not benefit the novice teachers by helping them become more effective teachers. In fact, the treatment group scored lower on the TEAM LOE evaluation than the control group. To find the reason for the unexpected results of this study, many questions and their answers were considered. The reason for this unusual finding can most likely be attributed to a Tennessee Educator Policy that went into effect in 2014.
The treatment group in this study began their induction program in 2011, the same year the TEAM evaluations being used to evaluate teachers in Tennessee. Since TEAM evaluations were not conducted before 2011 there were no previous TEAM evaluation scores with which to compare. The treatment group ended in 2014 with the end of the grant money. The control group started teaching in 2014 and included teachers from then until 2017. Research found that in 2014 a new policy was adopted by the Tennessee State Board of Education. The policy stated that “all preparation programs must include training to support candidates’ understanding of a state approved educator evaluation framework. Programs are encouraged to employ state-approved evaluation tools for the purpose of evaluating candidates during clinical experiences” (Tennessee Educator Preparation Policy, 2014). It made sense for teaching institutions to use the TEAM evaluation tool because it was readily available and already being used to evaluate teachers. Therefore, the control group was likely taught the components evaluated in TEAM evaluation and were also likely evaluated using the TEAM evaluation during their student teaching therefore giving the control group an advantage over the treatment group and accounting for why the control group had better Level of Effectiveness scores than the treatment group.
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Retrieved from


Teacher and administrator evaluation in Tennessee: A report on year 4 implementation.


Appendix
Appendix A

Map of Appalachia
Teacher Matching Pairs
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Appendix C
Level of Effectiveness (LOE) Scores
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Appendix D

Paired T-test Results
Paired T-test Results

**P value and statistical significance:**
The two-tailed P value equals 0.0455
By conventional criteria, this difference is considered to be statistically significant.

**Confidence interval:**
The mean of Group One minus Group Two equals 0.42
95% confidence interval of this difference: From 0.01 to 0.83

**Intermediate values used in calculations:**
t = 2.0870
df = 30
standard error of difference = 0.201

**Data:**

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| N       | 31        | 31        | (Quick Calcs, 2018)