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The Relationship Between the Growth Score and the Overall TEAM Observation Rating
for Teachers in Tennessee

A dissertation
presented to
the faculty of the Department of Educational Leadership and Policy Analysis
East Tennessee State University

In partial fulfillment
of the requirements for the degree
Doctor of Education in Educational Leadership

by
Joshua B. Davis
December 2014

Dr. Virginia Foley, Chair
Dr. Pamela Evanshen
Dr. Eric Glover
Dr. James Lampley

Keywords: Teacher Evaluation, TVAAS, First to the Top

ABSTRACT

The Relationship Between the Growth Score and the Overall TEAM Observation Rating for Teachers in Tennessee

by

Joshua B. Davis

The purpose of this study was to investigate the relationship between the TVAAS growth score given by the Tennessee Department of Education and the overall Tennessee Educator Assessment Model (TEAM) observation rating for teachers in grades 3 through 8. The participating county public school system for this study is located in Northeast Tennessee. Participants were teachers in the school system teaching Math, English/Language Arts, Science, and Social Studies in grades 3 through 8 in 10 elementary schools, 6 middle schools, and 2 K-8 schools. Specifically, this research examined the relationship between the TEAM observation scores and overall TVAAS growth score given to the teacher from the Tennessee Department of Education based upon yearly-standardized test scores. Research reinforced mixed views about the validity and purpose of teacher evaluation systems and the use of Tennessee Value-Added Assessment System. Five research questions guided this study and quantitative data were analyzed using a Pearson correlation and a one-way MANOVA. Results indicated a weak relationship between a teacher's TEAM observation scores and the TVAAS growth score given by the Tennessee Department of Education.

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DEDICATION

It is with great honor that I dedicate this work to my wife Wendi Davis and our children Emma and Andrew. This journey has been a personal goal I have strived to attain since entering the field of education over 10 years ago. Emma, you are a strong independent young lady whose thirst for knowledge and information inspire me to learn and seek knowledge every day. The sky is the limit and I can't wait to watch you reach your dreams. Andrew, it has quickly become apparent you have a thirst for life and you bring joy to us every day. You are my joy and my smile. Wendi, I thank you for your love, patience, and support throughout this process. Without you this would never have been possible. I could not imagine this journey without you.

Further, this work is dedicated to my parents Jim and Becky Davis. From an early age, you instilled in me the importance of seeking an education. You allowed me to think of the impossible and believe I can achieve the highest levels of education. Your hard work and dedication to ensure a healthy and happy childhood allowed for constant love and support. While my father didn't make it to the end of this journey, I know he knew I would complete it.

ACKNOWLEDGEMENTS

I would like to express my sincere gratitude and appreciation to the many people who have supported me in the completion of my dissertation. I would like to express a special thank you to Dr. Virginia Foley, the chairperson of my committee, for her constant direction and support throughout the entire process. You are an exceptional leader and a model for all of us who enter school leadership. I appreciate your words of wisdom and encouragement and reflect on them daily in practice.

I would also like to thank my committee members: Dr. Eric Glover, Dr. James Lampley, and Dr. Pamela Evanshen. Dr. Glover, you are an exceptional thinker and continually push me to go beyond the known and be a reflective person. Dr. Lampley, it is safe to say I would never have made it through this process without you. Your knowledge of statistics and the research process has been invaluable. Dr. Evanshen, you have been a part of my education path from the beginning and I use the many things you have taught me daily as an early childhood administrator.

I would also like to thank the leadership team of Sullivan County Schools. Your encouragement and belief in me as an administrator has been humbling. I seek each day to help be part of the journey we are on to make education in Sullivan County the best it can be for students, teachers, staff, and community. To my colleagues who lead the schools of Sullivan County, I sincerely thank each and every one of you. We talk, we share, we laugh, we cry. Above all, we support one another on this wild journey and learn from each other daily. We could not do what is now required of school leaders without the support of one another.

Finally, I would like to thank the faculty, staff, students, and parents of Rock Springs Elementary School. It is a privilege to serve the students and families of this great community. You inspire me each day to become a better leader and lead with a servant's heart.

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CHAPTER 1

INTRODUCTION

Public Education is often viewed as a mixture of federalism where the federal government and the states share responsibility for education policy. While the state governments have always assumed the responsibility for funding and legislation, the federal government has increasingly become focused on the equality of education. The Elementary & Secondary Education Act of 1965 (ESEA) was a Great Society program enacted in 1965 by Congress during the Lyndon B. Johnson Administration. With its passage were directed federal funds for primary and secondary school education. This Act also provided a vehicle to hold schools and states accountable for student achievement and increase the equality of educational rights for minorities and children living in poverty. The Act targeted children of low-income families, particularly rural, Native Americans, neglected, migrant, homeless, and English language limited families with the aim to provide long-term results by improving schools and the resources available to them. In 1965 when the Act was established there was a large achievement gap stratified by race and poverty (Murphy, 2014).

The most recent revision and reauthorization of the ESEA was Public Law 107-110, also known as the No Child Left Behind Act of 2001 (NCLB), authorized by Congress and the George W. Bush administration. PL 107-110 stated the purpose of this law was to ensure that all children have a fair, equal, and significant opportunity to obtain a high-quality education. An addition to NCLB was the call for children to obtain proficiency on challenging state achievement measures. Blewett and Kaufman (2012) stated that NCLB is clearly concerned with educational outcomes and achievement.

On February 17, 2009, President Barack Obama signed into law the American Reinvestment and Recovery Act (ARRA). The Act stated the purpose of this legislation was to stimulate the economy, support job creation, and invest in critical sectors including education. The ARRA created a foundation for education reform through investments into innovative teaching strategies that will lead to increased student achievement and long-term gains in the productivity and effectiveness of schools.

The ARRA provided 4.35 billion dollars in the federal grant program known as Race to the Top (RttT). The Race to the Top Initiative listed four core areas for education reform:

1. Adopting standards and assessments that prepare students to succeed in college and the workplace and to compete in the global economy;
2. Building data systems that measure student growth and success, and inform teachers and principals about how they can improve instruction;
3. Recruiting, developing, rewarding, and retaining effective teachers and principals, especially where they are needed most; and
4. Turning around our lowest-achieving schools. (U.S. Department of Education, 2009, p. 2)

Tennessee was announced as one of the first states to receive Race to the Top grant funds. Tennessee's application, titled First to the Top, included reforms to curriculum standards, new assessment measures, and a new teacher evaluation system. The goal of First to the Top was for Tennessee to be the fastest improving state in the nation by 2015 as measured by the ACT and the National Assessment of Educational Progress (NAEP).

Statement of the Problem

The purpose of this study was to investigate the relationship between the TVAAS growth score given by the Tennessee Department of Education and the overall Tennessee

Educator Assessment Model (TEAM) observation rating for an individual teacher in grades 3 through 8 in the participating county public school system.

With the emergence of Tennessee's First to the Top education reform, the teacher evaluation system has undergone major changes in the past 3 years. Tennessee adopted the Tennessee Educator Assessment Model (TEAM) for teacher evaluations. The TEAM model is different from previous models with an increase in frequency of observations and indicators for teacher performance. Teachers are also linked to student performance to determine teacher effectiveness through the Tennessee Value-Added Assessment System. For the first time in the state's history, Tennessee teachers are given an effectiveness rating determined by both observation scores on TEAM and student effect data derived by state assessments for both achievement and growth. Specifically, this research examined teacher effect data as prescribed by Tennessee using the Tennessee Value-Added Assessment System for growth measures to determine if a relationship existed with the overall observation scores given by principals using the Tennessee Educator Assessment Model. At the conclusion of the 2012-2013 school year, Tennessee Commissioner of Education Kevin Huffman concluded there is a relationship and assigns ratings to administrators and districts based on how closely aligned the scores are at the end of each academic year.

Research Questions

To investigate the following research questions were created from data retrieved for this study:

Research Questions:

1. Is there a relationship between the TVAAS growth score given by the Tennessee Department of Education and the overall TEAM observation rating for teachers in grades 3 through 8 in the participating county public school system?
2. Is there a relationship by gender (male or female) between the TVAAS growth score given by the Tennessee Department of Education and the overall TEAM observation rating for teachers in grades 3 through 8 in the participating county public school system?
3. Is there a relationship by type of teaching license (apprentice or professional) between the TVAAS growth score given by the Tennessee Department of Education and the overall TEAM observation rating for teachers in grades 3 through 8 in the participating county public school system?
4. Is there a relationship by grade level taught (elementary or secondary) between the TVAAS growth score given by the Tennessee Department of Education and the overall TEAM observation rating for teachers in grades 3 through 8 in the participating county public school system?
5. Is there a relationship by years of experience of the administrator (1 year experience, 2 to 4 years experience, 5 to 10 years experience, 11 or more years experience) between the TVAAS growth score given by the Tennessee

Department of Education and the overall TEAM observation rating for teachers in grades 3 through 8 in the participating county public school system?

Significance of the Study

In order to assess the relationship between teacher growth scores and observation scores more research is needed to determine the validity of the Tennessee Educator Assessment Model (TEAM) and the overall effectiveness rating given to teachers by Tennessee in achievement and growth scores on the Tennessee Comprehensive Assessment Program (TCAP). The purpose of this study is to determine if there is a relationship between the TVAAS growth score given by the Tennessee Department of education and the overall TEAM observation rating for teachers in grades 3 through 8 in Sullivan County, Tennessee, School System.

Race to the Top requires that measures used in teacher evaluation be comparable across teachers. Marzano (2013) stated that “most teachers agree that measures of student learning should be included in teacher evaluation models, but they want these measures to be useful and fair” (p. 82). At the present time there is much confusion regarding the scores teachers receive in Tennessee to determine their overall level of effectiveness. Marzano and Toth (2013) asserted that in order for evaluation systems of this type to be effective, common assessments with common growth measures should be developed. Beginning in 2015, Tennessee will join 44 other states with the full adoption of the Common Core State Standards and will use the national assessment known as the Partnership for Assessment of Readiness for College and Careers (PARCC). This should move Tennessee closer to the goal of Race to the Top with a national set of standards and a common assessment.

The findings of this study could provide data for Sullivan County Schools who seek to obtain a better understanding of the relationship between the TVAAS growth score given by the Tennessee Department of Education and the overall TEAM observation rating for an individual teacher in grades 3 through 8 in Sullivan County, Tennessee, School System. This study may also add to the already existing body of literature related to the Common Core State Standards, Teacher Evaluation Systems, Teacher Effect Data, and the Race to the Top Initiative.

This study is also significant because of the emergence of the Department of Education's push to link TEAM observation scores and student achievement data. At the conclusion of the 2012-2013 school year, the Department of Education released data for every public school in the state with a number, 0-5, stating how closely TEAM observation scores related to student achievement and growth data according to the Tennessee Value-Added Assessment System. The data in this study represent TEAM observation scores prior to the release of this information from the Department of Education. Future data sets could be biased based upon the knowledge that TEAM observation scores and student growth and achievement scores must be related.

Delimitations

This study was confined by the following delimitations:

1. The teachers and data used were restricted to one school system, Sullivan County, in the entire state that is using this evaluation system.

Limitations

1. Every school system has different and unique qualities because of the approach in which the evaluation system is handled.

2. The number and type of teachers involved in the study might limit the study.
3. My experience and bias as an employee and principal of Sullivan County Schools might produce some bias that could limit the study.

Definition of Terms

Apprentice Teaching License: Initial 3-year teacher license issued to applicants who hold a bachelor's degree, are enrolled in or have completed a teacher preparation program approved by the State Board of Education, and have verified content knowledge as defined in State Board policy (Tennessee Department of Education, 2014).

Dialogue: Inquiry that surfaces ideas, perceptions, and understanding as conversations between two or more individuals and listening skills are used while participants are encouraged to share their thoughts in a safe environment (Glover, 2007).

Growth Score: The value-added, or growth score, analyzes available data from previous years to help schools evaluate how much cohorts of students have gained in a school year by answering questions like did this student make at least 1 year's worth of progress.

The growth score is derived from a formula indicating at least 1 year's worth of growth (Tennessee Department of Education, 2014).

National Assessment of Educational Progress (NAEP): The National Assessment of Educational Progress is the largest nationally representative and continuing assessment of what America's students know and can do in various subject areas (National Center for Education Statistics, 2014).

Professional Teaching License: A 6-year teacher license issued upon meeting licensure expectations at the apprentice level and completion of an approved teacher preparation program. Renewable (Tennessee Department of Education, 2014).

Tennessee Educator Accelerator Model (TEAM): Teacher evaluation model used by many districts in Tennessee that consists of frequent observations and constructive feedback for educators through multiple observations and pre- and postconferences (TEAMTN, 2014).

Tennessee Value-Added Assessment Program (TVAAS): System that measures the impact schools and teachers have on their students' academic progress. TVAAS measures student growth, not whether the student is proficient on state assessments (Tennessee Department of Education, 2014).

Overview of Study

This study is organized into five chapters. Chapter 1 includes the introduction, the statement of the problem, the research questions, significance of the study, delimitations, limitations, definition of terms, and the overview of the study. Chapter 2 contains a review of the related literature. Chapter 3 explains the methodology used in the study. Chapter 4 reports the findings of the data analysis. Chapter 5 incorporates the summary, findings, conclusions, and recommendations for this study.

CHAPTER 2

LITERATURE REVIEW

The 21st century has ushered in many new waves of change. The world prepared for and ushered in the dawn of a new millennium. With that new millennium came a new political season. The turbulent presidency of Bill Clinton was coming to an end and the nation felt a great divide between the two parties (Hamilton, 2007). After much debate and with the closest victory in modern time, President George W. Bush was elected president. The nation was divided and it seemed change was needed. With this new president came change. Hamilton noted the general consensus was that the partisan politics of the past decade were coming to an end and a new era would begin.

On September 11, 2001, America was attacked in New York City and Washington, DC. and the country entered a time of fear and loss through two bloody wars in the Middle East (Goldsmith, 2009). With the economy on the brink of collapse, it seemed that change had occurred. This change was not what Americans had asked for, nor expected. Americans were once again divided and frustrated. During this time of frustration several new forms of legislation were passed.

Perhaps the most sweeping and controversial piece of legislation was Public Law 107-110, also known as the No Child Left Behind Act of 2001. This overhaul of the American education system placed higher accountability measures on states using standardized test scores with the idea that all children would meet specified benchmarks labeled as proficient (PL 107-110, 2001). To further complicate the problem, the PL 107-110 set dates for standards to be met. Instead of addressing the need for change in student learning, PL 107-110 placed an emphasis on standardized test scores. Barrett (2009)

noted that education reforms prior to NCLB still left teachers with autonomy while the No Child Left Behind Act placed restraint on teachers and took away autonomy as district and state leaders began to make all key decisions including what to teach, how to teach it, and how much time to spend teaching it. Pease-Alvarez and Samway (2008) stated that the effects of NCLB forced teachers to comply with a prescribed curriculum, methods, and subject pacing all monitored by building and district administrators. Granger (2008) noted that the high-stakes accountability of teachers and students appears to have a negative consequence for teachers' relationships with students, practice, and professional self-efficacy. In what seemed to be an overriding theme of the Bush Administration, fear was again placed upon our schools. Schools feared testing because the outcome could land the school on a failure list (Goldsmith, 2009).

Pfeffer and Sutton (2000) stated that the adverse consequence of fear mongering is that it creates a focus on the individual rather than on the collective. Pfeffer and Sutton also noted after the terror attacks on our country in 2001 the Bush Administration had the prime opportunity to enact change but failed to create unity in the nation. Instead, the Bush Administration used fear tactics to divide and conquer that eventually placed the individual ahead of the nation and took America right back to where the millennium began. Granger (2008) reminded that the Bush Administration's Secretary of Education, Rodney Paige, tagged those who resisted NCLB as enemies of public education subsequently vilifying the National Education Association as a terrorist organization. By 2005 new Secretary of Education Margaret Spellings was telling states that began to oppose NCLB that their funding would be at risk if they did not complete the plans under the act (Hess & Petrilli, 2009). Hess and Petrilli also reported that the Commonwealth of

Virginia voted 98-1 to condemn NCLB for representing the most sweeping intrusions into state and local control of education in the history of the United States. America was once again divided and on the threshold of a new and historical election where Americans once again demanded change.

During the 2008 presidential campaign one word echoed throughout the American democracy including the field of education (Spring, 2010). That word was change. The motives behind such actions are usually to evoke or rekindle a lost spirit or a past time when things may have been better. Spring (2010) reported that as America stood at the dawn of this new presidency its people questioned if America's new leaders would enact change for the American nation.

Merriam-Webster (2014) defined change as "to make something different; to make radically different; to give a different position, course, or direction to" (p.115). It is of particular interest that the second part of Webster's definition of change includes the words, "radical change." America's education system has seen radical change over the past 13 years with the passage of the No Child Left Behind Act of 2001. The problem with this radical change is that a greater emphasis has been placed on individual achievement rather than the large-scale reform that was the original intent (Spring, 2009). Schlechty (2009) stated that the problem with our current education system is that it assumes that the success of some children is dependent on the failure of others. Moreover, he explained that there is a great need not to reform America's public education system but to transform it. Friedman (2007) coined the phrase a flattening of the world. With this flat world, Friedman stated that this new world presents us with new opportunities as well as new challenges particularly as Americans. Friedman concluded

that it is imperative that Americans face the challenges of a new world head on. The result of not facing these challenges could be disastrous for our society. Schlechty (2009) continued to explain that this transformation must happen or America's ability to compete in the global marketplace will be compromised. If Friedman's and Schlechty's conclusion about a needed transformation is correct, educational leaders must examine how change has been enacted in the past and find new ways of enacting a different kind of policy. The challenge now lies in finding the right course of positive change.

Darling-Hammond (2009) stated there are several competing theories of change including a bureaucratic approach, a professional approach, a market approach, and a democratic approach. Each approach is defined by certain characteristics. The bureaucratic approach is hierarchical in nature and revolves around centralized management. The professional approach focuses on increasing the capacity of knowledge in practioners who can then make sound educational decisions. Finally, Darling-Hammond stated that a democratic approach seeks to involve students, parents, community members, and teachers in developing better schools. Ultimately, Darling-Hammond concluded there is a critical need for investments in teacher learning and that change depends on highly skilled teachers. Along with highly skilled teachers other key components in creating a culture of change will be necessary.

Fullan (2001) discussed that in creating a culture of change you also must have accompanying messiness. Past changes or reforms in public education have been more systematic in that changes were black and white with winners and losers. Many leaders have referred to change as an event. Fullan dismissed this notion by stating emphatically

that change is a process not an event. Not only is this process messy but also slow. For true change to occur it must take place over time.

For change to be enacted over time the central ideas or theories to enact change must also stand the test of time. Therefore, change has to take place over time with a deep commitment by leaders to stay the course. Too often systems jump into the waters of change without a clear purpose (Murphy, 2014). When this happens the water becomes muddy. These muddy waters often force further change and the original purposes of change become unclear. Murphy concluded the end result often is an abandonment of the current pool and a nosedive into yet another one with new change to occur. Systems make the mistake time and time again of not giving the change process the nurturing it needs to sustain over time. Fullan (2008) labeled this idea as “having theory that will travel in that theories make sense of the real world and are tested against it” (p.1). In this era of No Child Left Behind and high stakes testing with short-term results, Fullan (2001) stated that leaders in a culture of change require the capacity to resist a focus on those short-term gains and resist going for an immediate boost in test scores in order for the change process to diffuse into all parts of the culture. Fullan (2008) further stated that good theories travel across both private and public sectors and they apply to geographically and culturally diverse situations. Hargreaves (2009) stated that what ultimately bears the weight of sustainable change is not government but people working together around a shared purpose.

Maxwell (2010) explained that a key result of communicating effectively with people is that a leader forms connections with people. Sanborn (2010) explained that communication is often negatively affected when purpose and focus are unclear. This

became evident in the 2008 election as Barack Obama won the presidential elections in part due to his effective style of communicating change for America. President Obama's call for change in America's education system came in the initiative he labeled Race to the Top.

The Race to the Top (RttT) grant competition earmarked \$4.3 billion dollars in federal funds for states from the American Recovery and Reinvestment Act (U.S. Department of Education, 2009). According to the proposal the money would be distributed to those states making an effort to adhere to particular reforms such as lifting caps on charter schools, tying teacher evaluations to test scores, and opening alternative teacher certification markets (U.S. Department of Education, 2009). In the Race to the Top reform the United States Department of Education (2010) outlined six priorities that are (1) comprehensive approach to education address the four core education reform areas; (2) emphasis on Science, Technology, Engineering, and Mathematics (STEM); (3) innovations for improving early learning outcomes; (4) expansion and adaptation of statewide longitudinal data systems; (5) P-20 coordination, vertical and horizontal alignment; and (6) school level conditions for reform, innovation, and learning.

At the center of this reform was President Obama's Secretary of Education, Arne Duncan. Prior to his secretary appointment, Arne Duncan served as the CEO of the Chicago Public Schools. During his tenure in Chicago, Duncan oversaw Renaissance 2010, a citywide plan to close 60-70 schools and reopen 100 new schools with at least two thirds of those new schools being charter or contract schools run by private organizations (Lipman, 2012). The goal of these nonpublic schools was to have greater autonomy than public schools with the attempt to create an educational marketplace of

nonunionized labor (Lipman, 2012). Saltman (2007) stated Chicago and Arne Duncan looked to achieve this goal by closing “failing” schools and opening more charter and contract schools that white, middle-class parents would feel good about. Neighborhood schools were closed and thousands of residents in Chicago were displaced from public housing as the private sector moved in to develop poverty-stricken areas for middle-class families (Lipman, 2011). Most of the newly opened charter schools were run for profit with corporate models of efficiency and effectiveness, one-size-fits-all curriculum of watered down test-prep, and teacher evaluation systems that used student test scores to assess their teachers (Lipman, 2012).

With Race to the Top, Secretary of Education Arne Duncan was given \$4.3 billion dollars to enact similar reforms throughout the nation as he did in Chicago despite no significant evidence of increased academic achievement (Klonsky, 2009). As part of the American Recovery and Reinvestment Act, Race to the Top was created as an economic stimulus program just as Renaissance 2010 was in Chicago. Secretary Duncan has referred to the economic crisis as the perfect storm for reform that will transform public education in America (Christianakis & Mora, 2012). Duncan (2009) stated to an audience that improving education can restore the economy and later asserted that the Race to the Top reform has the ability to transform education by preparing students for college and career readiness as well as demonstrate competitiveness in a global economy.

As in Chicago, the emphasis was again made that in order to receive Race to the Top funds, states would have to create a plan to turnaround the lowest achieving schools. Turning around schools meant:

Linking test scores to teacher evaluation and compensation [merit-based pay]; the rapid expansion of charter schools; the development of data systems that could

facilitate remote control of schools and classrooms; and aggressive intervention for schools with low test scores, including closures, firing of staff, and various forms of state and private takeovers. (Karp, 2010, p.62-64)

The result of education, therefore, is about economic surplus through exporting oneself into a global marketplace. Lipman (2011) stated that local, both in terms of the self and the locale, are seen as commodities to be bought and sold. Ideas about participatory democracy, education for full development, equitably funded free public education, and other models were torn into parts. The Race to the Top reform called for an increase in student rigor and performance on national assessments that lead to the creation of a uniform set of standards for states to adopt. This set of standards is called the Common Core State Standards (CCSS).

The Common Core State Standards are a set of national kindergarten through 12th grade standards created by the Council of Chief State Officers (CCSSO) and the National Governors Association Center for Best Practices (NGA Center) and primarily funded by private foundations including the Bill and Melinda Gates Foundation and the Broad Foundation (Wexler, 2014). As of January 2014, 45 states, the District of Columbia, and four United States territories have adopted the standards. The NGA Center (2010) stated the Common Core State Standards represent a set of expectations for student knowledge and skills in mathematics and English language arts that high school graduates need to master to succeed in college and careers. The NGA Center (2010) listed the following criteria were used to develop the standards:

- Aligned with college and work expectations;
- Include rigorous content and application of knowledge through high-order skills;
- Build upon strengths and lessons of current state standards;
- Informed by top-performing countries, so that all students are prepared to succeed in our global economy and society; and
- Evidence and/or research-based.

Calkins, Enhrenworth, and Lehman (2012) stated “that no single document will have played a more influential role over what is taught in our schools” (p.1). They asserted that the Common Core State Standards helps students acquire the skills for success beyond high school and offer consistency in the education process for students across the nation.

With the impact of the Common Core State Standards still to be determined, some citizens are left skeptical with the emergence of the new standards. Wexler (2014) stated that teachers are concerned about the Common Core State Standards because they feel their autonomy and freedoms to teach in the classroom have been shifted to makers of standardized testing and state officials. Hess and McShane (2013) described the impact of the Common Core State Standards as states must change accountability measures and state testing, instructional standards and practices in kindergarten through grade 12, and the professional development of teachers. If the Common Core State Standards fail, reforms to these areas of education will fail, too. Results from the new CCSS aligned tests have shown declines in student proficiency rates (Hess & McShane, 2013).

In 2010 Tennessee was awarded \$501 million dollars from the federal government as part of the Race to the Top Initiative. Tennessee titled its initiative as First to the Top with the goal of being the fastest improving state in nation by 2015. Tennessee Governor Bill Haslam (2013) stated the administration’s goal was to be the fastest improving state in the nation by 2015. In return, the state restructured school reforms by replacing the teacher evaluation model and linking teacher effect scores to state assessments. The state also approved the transition from Tennessee Standards to the National Common Core State Standards in 2014-2015. With the new standards Tennessee agreed to replace the current Tennessee Comprehensive Assessment Program (TCAP)

with the national assessment, Partnership for Assessment of Readiness for College and Careers (PARRC) also to begin in 2014-2015. Tennessee enacted the reforms proposed by President Barack Obama head on in hopes of increased proficiencies on state and national assessments. Figure 1 demonstrates 3 years of TCAP scores during the initial implementation period of the First to the Top Initiative.

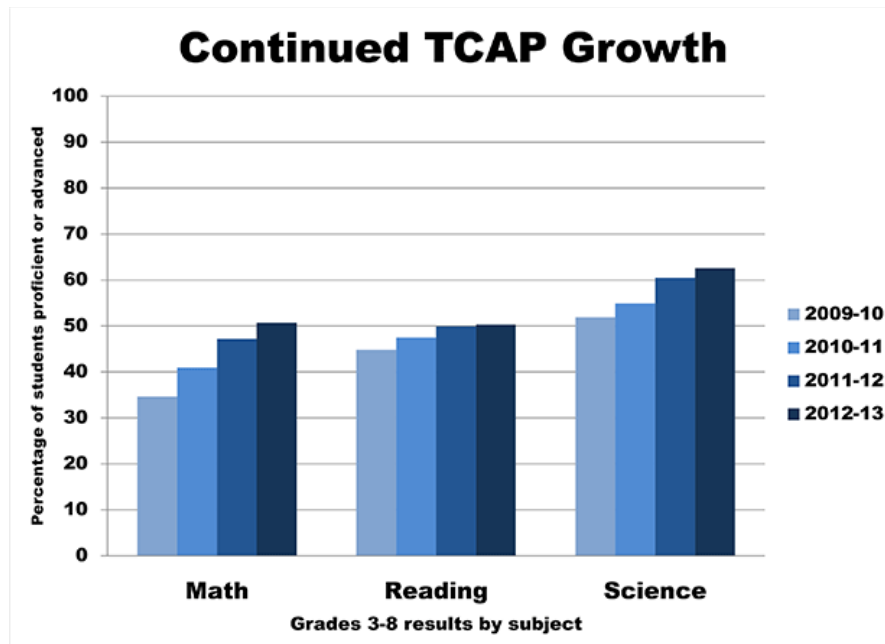


Figure 1. Tennessee students proficient or advanced on state assessments through the transition to Common Core State Standards.

In November 2013 Tennessee Governor Bill Haslam announced Tennessee had the largest academic growth in the nation of any state on the 2013 National Assessment of Educational Progress (NAEP), making Tennessee the fastest improving state in the nation. The NAEP results also show that Tennessee had the largest growth of any state in a single testing cycle since NAEP started comparing states to nationwide assessments more than 10 years ago (National Assessment of Educational Progress, 2013). Tennessee has also seen 3 years of continuous growth on state assessments known as the Tennessee

Comprehensive Assessment Program (TCAP). State assessment figures demonstrate since 2010, 91,000 more students are on grade-level in math, and 52,000 more students are on grade level in science.

With improved proficiencies on state assessments and the label of the fastest improving state in the nation, Tennessee now stands waiting to still examine the true effects of the transition to the Common Core State Standards and the Race to the Top initiative. As government dollars fade, Tennessee students, teachers, and educational leaders stand at the entrance to the full implementation of the CCSS and the PARRC assessment in 2015.

At a time when globalization, technology, and education reforms are altering the world in which we live, there are complex challenges facing American educators. Zhao (2009) discussed the globalization of the world's economy and used China and the United States to reinforce these complex challenges. China, a developing country, is determined to make societal changes to take it from a labor and manufacturing based society to a society dominated by technology and innovation (Zhao, 2009). Opposite to that transformation has been the education reforms in the United States. With the No Child Left Behind Act of 2001 and the Race to the Top initiative of 2009 the United States has pushed education reforms that place greater emphasis on standardized-testing and dictated knowledge.

The National Academies (2005) released a report titled *Rising Above the Gathering Storm: Energizing and Employing America for a Brighter Economic Future*, at the request of the United States Congress to assess America's ability to compete in the 21st century. The National Academies reported that 15% of undergraduates in the United

States received college degrees in engineering or a science related field. In comparison, Singapore was the highest with 67% followed by China at 50%, France at 47%, and South Korea at 38%. Also noted was that 56% of engineering PhDs and 34% of doctoral degrees in the United States were given to individuals born outside the United States. Finally, the National Academies reported that China and India have doubled their production of engineering and computer science degrees while the United States has remained fairly unchanged.

To many this information is troubling and calls for immediate action in education reform. Pink (2005b) emphasized this point “When I was growing up, my parents told me, ‘Finish your dinner. People in China and India are starving. I tell my daughters, ‘Finish your homework. People in India and China are starving for your job’” (p. 2). These concerns surrounding China, India, and other nations around the world surpassing the United States are warranted and justified. These nations have found success through changes in their education systems in math, science, and engineering. Strong American Schools (2008), supported by the Bill and Melinda Gates Foundation and the Eli and Edythe Broad foundation, compiled a list of figures about the United States Education System in a call for reform. Strong American Schools stated that 1.2 million students drop out of high school every year. That is equivalent to 6,000 students per day in the United States. One fourth of all high school students in the United States do not graduate on time with a majority of these failures coming in the freshmen year. Three out of 10 college freshmen end up repeating at least one high school class in college. Strong American Schools also stated that while 80% of 10th graders intend to go to college and earn a degree, nearly half of them fail to graduate from college. The study also found that

70% of eighth graders cannot read at grade level and most will never catch up to grade level reading scores. More than a one third of middle and high school math courses are taught by individuals who lack proper math teaching certifications. As for individual states, the study found that 25 million students attend school in states that have set proficiency standards for fourth grade below basic levels of reading achievement. Fifty-five years ago the United States was first in the world in graduation rate. Today the United States is 19th in the world for graduation rate.

With the emergence of globalization and the rise of Asian cultures in educational statistics as noted above, Americans must begin to transform their thinking to adjust for these shifts. Pink (2005a) used Howard Gardner's multiple intelligences framework to place a context around the skills necessary for American graduates to remain competitive in the global economy. The world has entered a new age in which right-brained thinking skills are becoming more important than left-brained thinking skills because of outsourcing or offshoring. Because of the cheap labor force in many Asian cultures, most right-brained work can be moved overseas. Pink listed six new essential skills to live successfully in the global economy that included:

1. Design, or the ability to create something physically beautiful and emotionally transcendent;
2. Story, or the ability fashion a compelling narrative;
3. Symphony, or the ability to see the picture and be able to combine separate pieces into an arresting new whole;
4. Empathy, or the ability to understand what makes their fellow woman or man tick, to forge relationships, and to care for others;
5. Play, or the ability to laugh and bring laughter to others; and
6. Meaning, or the ability to pursue more significant desires: purpose, transcendence, and spiritual fulfillment. (p. 65-67)

Schlechty (2009) stated that America's ability to compete at a global level will be negatively impacted because of the current system of education that promotes old ideas and ways of thinking.

In an attempt to address the changing global economy, the National Governors' Association, Council of Chief State School Officers, and Achieve Inc. (2008) called for state leaders to take the following specific action steps to ensure higher standards and expectations of the American education system:

1. Upgrade state standards by adopting a common core of internationally benchmarked standards in math and language arts for grades K-12 to ensure that students are equipped with the necessary knowledge and skills to be globally competitive.
2. Leverage states' collective influence to ensure that textbooks, digital media, curricula, and assessments are aligned to internationally benchmarked standards and draw on lessons from high performing nations and states.
3. Revise state policies for recruiting, preparing, developing, and supporting teachers and school leaders to reflect the human capital practices of top-performing nations and states around the world.
4. Hold schools and systems accountable through monitoring, interventions, and support to ensure consistently high performance, drawing upon international best practices.
5. Measure state-level education performance globally by examining student achievement and attainment in an international context to ensure that, over time, students are receiving the education they need to compete in the 21st century economy. (National Governors' Association, 2008, p. 6)

Transforming America's education system from a standards-based, test-driven system will take time. Schlechty (2009) argued that schools must be transformed, rather than reformed, because without transformation the learning that takes place in American schools will become fake and uninspiring. In order to achieve this, schools should transform into learning organizations. By definition, learning organizations will be

supportive to the types of teaching that will result in greater creativity, problem solving, and other 21st century skills. Hargreaves and Shirley (2008) called for a national vision of education for the overall good of the public in order to “develop greater innovation and creativity, expect and demand commitment, and perseverance from our students” (p.60).

The Role of the Principal

The role of the principal is vital to the overall success of schools in the 21st century. Bossi (2008) stated that America and the field of education must determine that the challenges of being a principal in the 1980s are hardly similar to the complex challenges that principals in today’s school must face. As the American educational system changes, so must the way they are led. Marzano, Walters, and McNulty (2005) found that principal leadership is significantly correlated with student achievement. Sanders and Simpson (2006) contended that curriculum leadership demands a broad set of transformational skills support, challenge, and influence on staff. Furthermore, there is widespread agreement among experts that meaningful change takes place primarily at the school level (Fullan, 2006; Glickman, 1993; Newmann & Wehlage, 1995; Schlechty, 2005). Fullan (2008) identified eight high-magnitude change forces at play with the first four being problematic and the last four being mixtures of downsides and elements of great potential:

1. Initiativitis
2. High-stakes vulnerability
3. Managerial diversions
4. Unfit for purpose
5. Strategies with potential
6. Recruitment and succession
7. Clusters, networks, and partnerships
8. International benchmarks (p.1)

Fullan (2010) discussed the idea of resolute leadership where leaders stay focused, especially during rough times, that will cause those around them to remain focused as well. Resolute leadership is important at first when new ideas or initiatives first arise in order to sustain and build upon the successes of the initiative (Fullan, 2010).

Liethwood, Dry, Sammons, Harris, and Hopkins (2008) concluded that principals influence student learning by setting direction, developing people, and creating collaborative cultures and structures with all stakeholders. In order to set direction, the principal leader must have a vision for the organization. A leader is commonly known to possess vision and is recognized as a visionary leader (Howard & Wellins, 2008).

Sackney and Mergel (2007) stated that the stewardship of the vision is a key responsibility of an organization's leader. It is essential for the principal to set the vision, communicate that vision to stakeholders, and ensure that the vision is at the core of practices throughout the organization. The vision is the big picture of the direction of the school. Spring (2010) stated that having the ability to see the big picture and to respond to rapidly changing factors in the environment on a continuous basis is another important role of a leader. Reimers (2009) referred to this skill as possessing global capacity.

Effective leaders continually seek the input of all stakeholders. It is important for the vision of the school to be communicated to all stakeholders in the organization.

Wiggins and McTighe (2007) reinforced the idea by stating through the inclusion of all stakeholders, including parents, teachers, community members, and other partners, the leader will be more likely to carry out an effective vision. Thomas et al. (2013) stated that all stakeholders must also be involved in the creation of the vision rather than have it passed down from the top or from the leader. This involvement can foster more

commitment on a personal level and allow stakeholders to be more compelled to carry out the vision. Dufour, Dufour, Lopez, and Muhamed (2006) stated that commitments and covenants are developed when all stakeholders of an organization know the direction of the vision and commit to implement the vision in specifically defined ways. In order to achieve this goal, all stakeholders will need to conduct reviews of the organization, set goals, and question the true purpose of the organization (Thomas, Redmond, & Smaldino, 2013).

When communicating vision to all stakeholders, dialogue is important. Glover (2007) stated that dialogue and open discussion are essential in creating change for teachers to act as leaders in the organization. Through dialogue and open discussion, the principal and all stakeholders involved can work toward creating and achieving the vision of the school. Glover (2007) described dialogue and conversation in the following way:

As participants in a conversation take turns listening and speaking, they unconsciously choose whether to dialogue, discuss, or debate. If participants choose to suspend individual opinions and remain open to hearing what other speakers think, they engage in reflective dialogue, which allows new thinking and ideas to emerge. Ideally, people develop a shared understanding of the possibilities, or possibility, they engage in open discussion. Discussion can lead to deep analysis as participants question their own and others' views. Participants become tough on issues but gentle with one another. (p.60)

It is important for all stakeholders to voice their own thinking and show respect for the opinions of those who are voicing their views. When using this process the views of the participants are expressed with a goal of developing new meaning (Glover, 2013).

Dufour, Dufour, Eaker, and Many (2010) stated that there must be similarity in the words and actions of the administrator to ensure that communication is clear to stakeholders.

After setting a vision for the organization, principal leaders must work to develop the people in the organization. Wiggins and McTighe (2007) stated that it is the professional responsibility of the leader to provide continued and ongoing staff development in order to maintain current knowledge of the best practices in education. The topics and structures for staff development are numerous but should always include information on what is needed to move the school forward based on academic and student achievement data. Darling-Hammond and Richardson (2009) reported that high-quality professional development must be centered on student learning. With the release and implementation of the Common Core State Standards (CCSS) professional development has become even more important for the success of schools. Hirsh (2012) stated, “While we are promoting radical change in creating a coherent national framework for what students should know and the way they learn, we have not yet committed to offering teachers the deep learning they will need to transform the way they work” (p.1). Gene Wilhoit, director of the Council of State School Officers, emphasized the need for teacher preparation that is appropriate to the successful implementation of the CCSS: “What made you think you could transform teacher practice and student learning with traditional models of professional development?” (p.1). New initiatives, like the Common Core State Standards, can usually be followed by new demands for the professional development of teachers (Desimone, 2009; Education Week, 2011). Darling-Hammond and McLaughlin (2011) conferred that professional development must encourage teachers to maintain the roles of both teacher and student and allow them to struggle through the chaos and turmoil of change of each role in order to gain a deeper understanding of the job or task at hand. Jenkins and Agamba (2013) stated that

professional development must focus on helping teachers determine that they are teaching what they are supposed to be teaching and students are learning what they are supposed to be learning. The professional development of teachers aims to successfully achieve teacher change that will improve teacher practice and will ultimately benefit student learning. Desimone (2009) stated that at least the push for the implementation of the Common Core State Standards has simplified the debate on professional development by creating a national set of standards that are the goal for all students to attain.

The professional development of teachers also includes the support of those teachers. Lassman (2013) concluded that administrators who do not support their teachers and staff on a continuing basis are roadblocks to the success and improvement of the organization. Furthermore, support and cooperation between teacher and administrators are the beginning of improved student achievement. Murphy (2014) called this the work of cultivating the seedbed. With this the administrator grows and supports the teachers and staff of the organization in order for the ultimate success of the organization through student achievement and learning.

After setting direction and developing people, another important role of the principal is to create a collaborative culture. Teacher best practices include the incorporation of teachers learning through practice, reading and reflecting on best practice, collaborating with other professionals, and focusing on student learning in everything they do (Darling-Hammond & McLaughlin, 2011). Teachers need to be involved in the process, what they are learning, and what they are doing. Professional Learning Communities (PLC) is one way to enhance the collaboration in a learning organization. Dufour et al. (2010) listed nine ways to build the foundation for a

Professional Learning Community. One of the first ways to build a collaborative culture is to move quickly into action. It is important for stakeholders within the organization to quickly begin to do things differently. A second action step is to build a shared knowledge in decision-making. Stakeholders who are uninformed are not able to make informed decisions. The third way to build a collaborative culture is to use the mission and vision statements to drive day-to-day decisions. The mission and vision must become a tool rather than a fancy slogan or poster hanging on the wall. Dufour also stated that the vision should be used to eliminate those practices that do not match the newly established principles of the collaborative culture. A fifth way to establish a collaborative culture is to simplify the complex ideas behind the collaborative culture so they can become usable. This is often through stories and other simple forms of translation for better understanding. A sixth way to create a collaborative culture is to write statements of behaviors to follow rather than creating statements of belief. Behaviors can be monitored, adjusted, and quantified, while beliefs are more difficult to follow. A seventh key component is the action of focusing on self rather than focusing on others. Individuals can examine and control what they are doing while trying to control the behaviors of others is much more difficult and less productive. Dufour concluded that stakeholders and leaders must understand that the process of creating a collaborative culture is not a linear process. It is a messy process and while it does not matter what you name the process or act, what the culture does to foster and create collaboration is what is important.

Jenkins and Agamba (2013) discussed the importance of a collaborative culture when dealing with the Common Core State Standards and the need for a seamless process

from preschool through 4 years of college. The collaborative process can then come full circle as university teacher education candidates graduate with the knowledge and skills to successfully teach in a system driven by the Common Core State Standards and focus on college and career readiness. Dufour (2011) reaffirmed this statement by stating that principals have been informed by professional organizations that a key role and responsibility for improving student achievement is by creating collaborative cultures of learning among the teachers of the organization.

Several scholars highlighted the role of the principal as a developer of various types of capital within the organization. Murphy (2014) defined six areas of capital that are important for leaders to develop within a school:

1. Human
2. Production
3. Resource
4. Cultural
5. Social
6. Integrative (p.417)

These areas of capital shift the focus from teaching to learning in today's schools. The role of the principal is then to use this capital to promote and enhance student and teacher learning.

The Role of the Teacher

Until recently with the passage of the CCSS, theoretical discourse on what constitutes the role of the teacher in learning organizations have provided broad definitions ranging from carer, guide (Rogoff, 1990), facilitator, scaffolder, coconstructor (Vygotsky, 1962, 1986), and role model (Lumpkin, 2008). The Common Core State Standards are changing the role of teacher with all these in mind. Schlechty (2009) reminded that teachers and teacher leaders must have the necessary skills and abilities

needed to develop in others the capabilities and commitments required to move a learning organization forward. It is essential for the teacher to have a clear picture of the direction or vision of the organization. The teacher has to know his or her role in making the vision a reality. Embedded throughout the Common Core State Standards is the expectation that the role of the teacher is shifting from the provider of information and learning to the role of facilitator of learning. In order to facilitate learning, teachers must ask the questions, “Learn what?” and “How will we know?” Dufour et al. (2010) explained these two questions are two of the most significant questions teachers should consider.

Another significant role of the teacher is that he or she must collaborate with colleagues. Dufour (2011) stated that it is essential to the success of American education to act now. Dufour reaffirmed that teachers collaborating with one another is essential to the success of the organization. The amount of research linking higher student achievement to collaborative cultures of learning is high. Hargreaves and Shirley (2008) discuss in their model of *The Fourth Way* that a transformation of the teaching profession is required where teachers learn and improve together in cultures of collaboration, trust, and responsibility.

The teacher should also be focused on being a learner. Through learning, teachers are improving their craft and in turn building self-efficacy. Marzano (2011) stated expert or experienced teaching does not happen by chance but through deliberate and prescribed practice. Teachers must constantly work on improving the craft of teaching. Schlechty (2009) noted that teachers must shift their learning from that of looking for plans to deliver instruction to that of designing learning opportunities for exploration and discovery. In order to achieve this goal, Schlechty also pointed out that teachers need to

explore the different ways students could learn and be ready to offer a wide array of learning experiences to meet the needs of each child.

In order to achieve this goal Marzano, Pickering, and Pollack (2001) listed nine instructional strategies for effective teaching and learning:

1. Identifying Similarities and Differences
2. Summarizing and Note Taking
3. Reinforcing Effort and Providing Recognition
4. Homework and Practice
5. Nonlinguistic Representations
6. Cooperative Learning
7. Setting Objectives and Providing Feedback
8. Generating and Testing Hypotheses
9. Cues, Questions, and Advance Organizers (p.7)

While using these nine instructional strategies, teachers begin to teach with a purpose in mind. Wiggins and McTighe (2007) stated that learning could only be successful if there is a purpose for the learning. In order to achieve these goals Wiggins and McTighe (2007) claimed what was needed was for teachers to focus with the end or desired results and goals in mind.

As a teacher, we must ask, in a backward-design way, what kinds of learning accomplishments are sought? What should be our role as a teacher in that learning situation, given the desired results? If the mission calls for developing student understanding leading to genuine transfer performances, not simply knowledge acquisition, then our job as teachers is dictated by those aims. (p.153)

Teacher Evaluation Systems

Teacher evaluation systems have played a major role with the emergence of the First to the Top initiative in Tennessee. Districts across the state of Tennessee have had to implement new evaluation systems in order to meet the demands and criteria of First to the Top. The need for change in teacher evaluation systems has been debated in this new age of accountability. Marzano (2012) called for new systems because the old teacher

evaluation systems have lacked measuring the quality of the teacher and have not helped in creating a more highly trained teaching market. Marzano also stated that the type of evaluation system depends greatly on the purpose of the system. The two purposes of teacher evaluation systems include measuring teachers and developing teachers.

Measurement and development are both important aspects of evaluation systems. If measurement is the primary purpose of the evaluation, fewer indicators are necessary for making a determination about a teacher. When development is the primary objective of the evaluation system, more indicators are necessary in order to provide specific and focused feedback about the growth of the teacher.

There are multiple measures of teacher evaluation found in the literature. Bell, Goe, and Little (2008) described the three most important and related measures of teacher evaluation: inputs, processes, and outputs. Inputs are elements such as teacher licensure and certification, content knowledge, and educational attainment. Processes are characterized as interactions between and among teachers and interactions between teachers and students. Outputs include student achievement results and graduation rates. Bell, Goe, and Little concluded that the use of multiple measures such as input, processes, and outputs is critical in ensuring effective teacher practice.

The application guidelines for the 2009 Race to the Top federal grant competition called for states to develop systems that evaluate teacher effectiveness using multiple rating categories, not the traditional system of satisfactory or unsatisfactory, and to take into account data on student growth (U.S. Department of Education, 2009). A number of researchers have called for multiple measures of teacher effectiveness, greater variety among teaching techniques, and stronger connections to outcomes for students (Gordan,

Kane, & Staiger, 2006; Heneman, Milanowski, Kimball, & Oddan, 2006; Toch & Rothman, 2008). In response to the Race to the Top grant competition, many states, including Tennessee, made sweeping reforms and changes to evaluation systems. Prior to these reforms Tennessee was one of many states using a binary system ultimately rating a teacher as satisfactory or unsatisfactory. The widespread use of binary rating systems has been criticized for lacking rigor, as nearly 99% of teachers in most districts earned satisfactory ratings (Weisburg, Sexton, Mulbern, & Keeling, 2009). In many of these same districts, formal teacher credentials, such as degrees and certifications, were used to evaluate and reward teachers. Research indicated that evaluating and rewarding teachers based on degrees and certifications have weak correlations with overall student achievement (Aaronson, Barrow, & Sander, 2007; Toch & Rothman, 2008).

What is called for by the Race to the Top grant competition is a performance-based evaluation system. Coggshall, Max, and Bassett (2008) defined performance-based assessment as a set of measurements of different aspects of teaching using multiple sources of evidence that provide both formative and summative feedback. Toch and Rothman (2008) stated a performance-based teacher evaluation system includes multiple measures of teacher performance and provides a range of evidence demonstrating a teacher's knowledge and skills based on student performance.

Teacher Evaluation in Tennessee

Tennessee incorporated a new performance-based evaluation model with the adoption of the First to the Top initiative in 2011. This evaluation model, known as the Tennessee Educator Acceleration Model (TEAM), examines the following indicators of teacher performance: lesson planning, classroom environment, lesson standards and

objectives, student motivation, lesson structure and pacing, teacher questioning, teacher content knowledge, teacher knowledge of students, the grouping and arrangement of students, academic feedback, activities and materials, student thinking, and student problem solving. The evaluation system requires 50% of the evaluation to be comprised of student achievement data that includes 35% based on student growth measures represented by the Tennessee Value-Added Assessment System (TVAAS) and 15% based upon additional student achievement measures selected by the teacher (TN Dept. of Education, 2012). Observation scores through the state's TEAM model comprise the other 50% of the evaluation.

Beginning in the summer of 2011 Tennessee partnered with the National Institute for Excellence in Teaching (NIET) to provide training for principals and system administrators who would be evaluating teachers. These administrators were then required to pass an inter-rater reliability exam in which they viewed a video of lessons being delivered by teachers and rated them on the TEAM rubrics to ensure they understood the difference between the different rating levels of performance (TN Dept of Education, 2012).

Implementation of the evaluation system began with the start of the 2011-2012 school year. As implementation continued through the first semester of the 2011-2012 school year, it became clear that satisfaction with the evaluation system varied considerably from district to district, driven largely by district- and school-level leadership (TN Dept. of Education, 2012). Administrators across the state were quick to discuss the positive impact the new model was having on instruction. The public did not have the same reaction. As a result of the negative public reactions, Tennessee Governor

Bill Haslam assigned the State Collaborative on Reforming Education (SCORE) with the task of conducting an independent review of the evaluation system including gaining feedback from every school district across the state (TN Dept. of Education, 2012). SCORE (2012) discussed several common themes in their investigation of the TEAM process. SCORE stated that administrators and teachers found that the TEAM evaluation rubric contained research based best practices in the field of education. Administrators reported that one benefit of having school-wide value-added scores was an increase in teacher collaboration across grade levels that were typically not assessed in previous years. Administrators also noted that a considerable amount of time was devoted to teacher evaluation process and that the process could be made more efficient in streamlining data and data entry. SCORE reported that the facilitation of professional development varied across districts and needed to be more aligned throughout the state. Teachers argued that it was not fair for those teaching in subjects not assessed to be given growth scores that did not include students in their classrooms. SCORE also reported that the selection of the 15% measure was misaligned and that many districts allowed teachers to select what was believed to be the highest value in school instead of an area that was applicable to their teaching.

There were several key changes made in the second year of the TEAM evaluation system in Tennessee. Of those changes, there were two changes made by the Tennessee Department of Education. First, students with disabilities were included in the individual teacher value-added growth scores (TN Department of Education, 2013). Never before in the history of the value-added system in Tennessee were students with disabilities figured into the formula for determining a teacher's individual growth score. There was also a

legislative change for those teachers who received the highest scores, a 5 overall on all measures, that included a modification and reduction in the number of overall observations to one complete observation with two additional walk-through observations for the entire year (TN Dept. of Education, 2013). Additionally, there was increased district flexibility through the approval of more than 40 plans to further customize the overall evaluation system to fit the needs of each individual district (TN Dept. of Education, 2013).

The Tennessee Consortium for Research, Evaluation, and Development (TNCRED) surveyed teachers and administrators across Tennessee about the state's evaluation system. TNCRED (2013) found that teachers' perceptions of the evaluation system have grown far more positive over the past year. Along with positive perceptions, teachers and evaluators reported seeing the evaluation tool as a method for improving classroom instruction and student learning across the state. More than half those teachers and administrators who responded to TNCRED's survey reported the evaluation process will improve instruction (TNCRED, 2013). The survey also found that those districts that chose to modify specific observation models to fit their district under year 2 guidelines looked more positively on the evaluation process than those who simply followed the state-prescribed plan. Additionally, TNCRED reported that more than 90% of teacher evaluators felt prepared to carry out all aspects of the teacher evaluation system.

In the summer of 2013 Tennessee began examining the relationship between individual growth scores, or TVAAS data and observation scores (TN Department of Education, 2014). When looking at the relationship between individual growth and observations, observations are converted into whole number levels of effectiveness.

Teachers without individual growth scores are not included in this analysis. The individual growth score and the observation score are compared. When the measures are three or more levels apart, they are considered to not have a logical relationship (TN Dept. of Education, 2014).

Tennessee Value-Added Assessment System

The Tennessee Value-Added Assessment System (TVAAS) was created in 1992 as a component of Governor Ned McWherter's Education Improvement Act (EIA). The TVAAS model was added by legislators as a call for increased accountability of teachers to ensure that the new funding would go to improving the quality of Tennessee's education system (Sanders & Horne, 1998). Sanders and Horne stated that the TVAAS model, along with other measures including promotion, attendance, and dropout rates of individual schools, would provide information to create a new system of accountability for Tennessee schools.

TVAAS, also known as the Sanders Model, was the "methodology designated to ascertain the effectiveness of school systems, schools, and teachers in producing academic growth in Tennessee students, thereby linking student academic outcomes to educational evaluation for the first time" (Sanders & Horne, 1998, p.248). The TVAAS model forced several new programs including the creation of a statewide standardized testing program.

The TVAAS is a statistical mixed-model theory to enable a multivariate, longitudinal analysis of student achievement data (Sanders, Saxton, & Horne, 1997). The TVAAS data included student scores on the Tennessee Comprehensive Assessment Program in math, science, language arts, and social studies and end-of-course

assessments in high school. Student test scores are scaled and used over time to model learning patterns (Sanders et al., 1997). Sanders and Horne stated that by following growth over time, it is possible to observe when the normal pace of academic growth deviates. The TVAAS is estimated county by county. Students who move out of the county or school system are not followed to the new location with their data nor is information about their past teachers used. Students who move into the county or school system do not bring any of their previous data with them including past test scores. A student counts as part of a teacher's effect data only if the student has been present in that teacher's classroom 150 days or more for the school year.

Support of the TVAAS model highlight several key components for improving student achievement. Jerald (2009) stated "value-added data provides principals, teachers, and parents with valuable information about students' past and predicted performance and give teachers feedback about the effectiveness of their own classroom instruction" (p.2). Through the tracking of student achievement and value-added data, teachers and administrators are better equipped to meet the individual needs of the student.

There is criticism to the TVAAS model. Researchers argued that the TVAAS model does not control for socioeconomic status (SES) and demographic factors that cannot only affect the starting point in student achievement but also affect the rate at which a student learns (Kupermintz, 2002; Linn, 2001). The Value-Added Consortium at the University of Florida College of Medicine (2000b) stated the variables of race and student income were almost always statistically significant and are commonly left out of value-added models. Darling-Hammond (1997) remained skeptical about the contributions of schools and teachers to learning when the control variables of race and income are left out. For

example, when the data show that students from impoverished backgrounds do not gain as much from 1 year to the next as more affluent students, it is hard to attribute that to the independent effect of their backgrounds or the quality of their teaching and learning.

Weiss (2011) raised the concern that in an ideal situation data that are intended to estimate causality, like TVAAS data, should be drawn from a randomly assigned sample of students, teachers, and classrooms. Schools and the typical educational structures in Tennessee do not operate this way at all, so this type of data is not randomly assigned or distributed (Weiss, 2011).

Additional criticism has surfaced indicating concern over the use of value-added data to determine teacher tenure, pay, and decisions relating to the continuation of employment. Konstantopoulos (2014) found that value-added accountability models have results that are inconclusive and the reliability and validity varied across different states. It was also found to be unclear that value-added measures that inform accountability systems are adequate enough to be tied to decisions of tenure, pay, and continued employment. Berliner (2013) affirmed that teacher evaluation systems based on value-added data systems are impossible to do fairly, reliably, and validly but are increasingly being used across the nation. Yettick (2014) found no association between value-added results and other accepted measures of teacher quality, such as the degree to which instruction is aligned with state standards or the structures of assessments.

Changing Global Economy

A changing global economy has increased the demands placed on America's schools. Murphy (2006) stated this new economy consisted of aspects that included the globalization of economic activity, easier access to information and technology, an

increase in the skills necessary to be successful, and an emphasis on the service industry to the global economy. Levy and Murnane (2006) warned that the great danger in a new 21st Century economy is a labor force that lacks the skills to do the new jobs requiring expert thinking and complex communication. Guidry (2012) stated that a report released by the Secretary of Education's Commission on Achieving Necessary Skills found that more than half the students in the United States leave school without the knowledge competencies or foundational skills required to find and hold a good job. The report continued that the ACT Corporation found that more than 75% of the jobs profiled required employees to have foundational skills in the following three areas:

1. Reading for information- the skill required to read and use text in order to do a job;
2. Applied mathematics- the skill required to apply mathematical reasoning to work-related problems; and
3. Locating information- the skill required to locate, synthesize and use information from workplace charts, graphs, tables, forms, flowcharts and diagrams. (Guidry, 2012, p. 28)

Research and literature have demonstrated that the end of the 20th Century and beginning of the 21st Century are marked with a sense of failure in the national education system. Crosnoe (2011) described this period by stating that the past 20 years have not been the glory days of the American education system. Murphy (2014) inserted the cause of this sense of failure is attributed to several factors. First, academic achievement in basic subject areas has not been satisfactory compared to other postindustrialized nations. Additionally, literacy development has been an issue for several years and the overall literacy development of students is of concern for colleges and universities. Another factor is the inability of American students graduating from high schools not ready for college or career. Murphy (2014) continued that in order for students to be college and

career ready students will need advanced knowledge in the areas of geography and economics as well as a deeper understanding and mastery for higher-order thinking skills. Ultimately, the workforce has changed and the labor force entering does not have the skills necessary to complete the job.

Another factor that contributed to a sense of failure of American schools is their inability to educate all of the nation's children, especially the poor (Murphy, 2014). The National Center for Education Statistics (2014) released information stating that in 2012 approximately 21% of school-age children (ages 5-18) in the United States were living in poverty. This percentage was higher than it was 2 decades earlier in 1990 when 19% of school-aged children lived in poverty. Tennessee exceeded the national average as approximately 37% of school-age children were living in poverty in 2012. The Tennessee Department of Education (2012) noted an achievement gap of 25% in math and 28% in reading between students in grades 3 through 8 living in poverty and those students not living in poverty.

Despite what has been stated, the goal of today's schools is not reform. Today's schools must transform into new vehicles for innovation and growth. Glover (2013) referred to this change in a call for deep and complex structural change as opposed to the old systems of accountability. Spring (2010) highlighted the need for societal change by stating that if the rest of the world lived the way American's were accustomed, we would need five planets. The problems our society faced are deep-rooted and also require deep and complex structural changes. Spring claimed in order to overcome our deeply rooted systematic problems our education system must take a proactive role in being part of the

solution to society's major flaws. Furthermore, the transformation of the modern culture is the mission of 21st Century Schools.

Summary

The past 13 years have been a period of major education reform in the United States. Beginning with NCLB, American leadership has seemingly taken a path toward common standards and centralized standardized testing while the expanding global trend has been to decentralize education practices that lead to creativity and innovation. In order for America to regain its presence as a world leader in the field of education, leaders will need to transform our educational system into a field that fosters and creates innovative thinking and exploration.

The state of Tennessee has adopted a goal of being the fastest improving state in the nation on ACT and NAEP assessment results by 2015. Through the First to the Top Initiative, Tennessee has invested federal grant funds from the Race to the Top Act into a new teacher evaluation system, student accountability measures, and the adoption of the Common Core State Standards. New laws linking teacher pay, tenure, and the continuation of employment to student performance and value-added data cause concern among the existing literature (Berliner, 2013; Yettick, 2014). Further investigation is needed to determine the validity, reliability, and usage of value-added data.

CHAPTER 3

METHODOLOGY

The purpose of this study was to investigate the relationship between the TVAAS growth score given by the Tennessee Department of Education and the overall Tennessee Educator Assessment Model (TEAM) observation rating for teachers in grades 3 through 8 in the participating county public school system. Specifically, this research examined teacher effect data as prescribed by Tennessee using the Tennessee Value-Added Assessment System for growth measures to determine if a relationship existed with the overall observation scores given by principals using the Tennessee Educator Assessment Model. Tennessee Commissioner of Education, Kevin Huffman, stated there should a relationship between a teacher's individual growth score and a teacher's overall observation scores and assigns ratings to administrators and districts based on how closely aligned the scores are at the end of each academic year. This chapter provides a description of the research design, selection of the population, the data collection procedures, research questions, null hypotheses, data analysis procedures, and a summary of the chapter.

Instrumentation

The Tennessee Value-Added Assessment System (TVAAS) is a statistical mixed-model theory to enable a multivariate, longitudinal analysis of student achievement data (Sanders et al., 1997). The TVAAS data includes student scores on the Tennessee Comprehensive Assessment Program in math, science, language arts, and social studies and end-of-course assessments in high school. Student test scores are scaled and used over time to model learning patterns (Sanders et al., 1997). Sanders and Horne stated that

by following growth over time, it is possible to observe when the normal pace of academic growth deviates. The TVAAS is estimated county by county. Students who move out of the county school system are not followed to the new location with their data nor is information about their past teachers used. Students who move into the county or school system do not bring any of their previous data with them including past test scores. A student counts as part of a teacher's effect data only if the student has been present in that teacher's classroom 150 days or more for the school year.

For the purposes of this research, a teacher's growth score is derived by the Tennessee Department of Education and refers more commonly to the term TVAAS. This TVAAS or growth score indicates the amount of growth students assigned to the teacher have demonstrated on state TCAP tests during that testing cycle. Teachers receive ratings of one through five based upon the percentage of students demonstrating at least 1 year's worth of growth. A teacher whose students have demonstrated 1 year's worth of growth will receive a score of a three indicating that the teacher has met the standard. Scores below a three are considered below the standard and scores above a three are considered exceeding standards.

Population

The population involved in this study consisted of professional teachers in grades 3 through 8 in the participating county public school system. These teachers were selected because they receive teacher effect data based upon courses they are directly responsible for teaching. For the 2012-2013 year only, third grade teachers were given individual growth scores because the SAT10 standardized test was given to students in second grade in the 2011-2012 school year. The SAT10 was only used in the 2011-2012

school year in the participating county public school system after becoming optional for districts beginning in the 2012-2013 school year. The teachers in this study were assessed and observed during the 2012-2013 school year with data being released in September 2013.

The participating school system for this study, Sullivan County School System, is located in Sullivan County, Tennessee. The system is comprised of 23 schools divided into 4 zones and serves over 10,000 students in grades Pre-K through 12. The Southern Association of Colleges and Schools accredit all the middle and high schools in the system. Sullivan County Schools is the third largest employer in northeast Tennessee with over 1,700 full- and part-time staff comprised of professionals and support. The Director of Schools is Dr. Jubal Yennie and the system is governed by the Sullivan County Board of Education and the Tennessee Department of Education. Participants for this study were both male and female and were hired through the selection process of Sullivan County Schools.

Data Collection Procedures

Prior to the beginning of this research project permission to conduct research was obtained from the Institutional Review Board (IRB) of East Tennessee State University and Dr. Jubal Yennie, the Director of Schools of Sullivan County, Tennessee. Teacher observation scores and teacher growth scores were retrieved from the Tennessee Department of Education released to each school system annually of all employees. All employee names, schools, and corresponding principals were coded by the school system prior to obtaining the information to ensure privacy and confidentiality of all parties

involved. The teachers, schools, and administrators were assigned codes and placed in a spreadsheet prior to being given to the researcher.

Research Categories

Grouping categories were used for research questions 2 through 5. For research question 2 the participants were grouped into 2 categories based on gender: male or female. For research question 3 the participants were grouped into 2 categories based on the type of license held by the teacher: apprentice license or professional license. For research question 4 the participants were grouped into 2 categories based on the grade level taught: elementary or middle. For research question 5 the participants were grouped into 4 categories based on the number years' experience of the administrator: 1st year as an administrator, 2 to 4 years' experience as an administrator, 5 to 10 years' experience as an administrator, or 11 or more years' experience as an administrator.

Research Questions and Null Hypotheses

The nonexperimental quantitative design analyzed the following research questions and null hypotheses.

Research Question 1: Is there a relationship between the TVAAS growth score given by the Tennessee Department of Education and the overall TEAM observation rating for teachers in grades 3 through 8 in the participating county public school system?

H₀1: The relationship between the growth score given by the Tennessee Department of Education and the overall TEAM observation rating for teachers in grades 3 through 8 in the participating county public school system is not different from neutral.

Research Question 2: Is there a relationship by gender (male or female) between the TVAAS growth score given by the Tennessee Department of education and the overall TEAM observation rating for teachers in grades 3 through 8 in the participating county public school system?

H₀2: The relationship by gender (male or female) between the TVAAS growth score given by the Tennessee Department of Education and the overall TEAM observation rating for teachers in grades 3 through 8 in the participating county public school system is not different from neutral.

Research Question 3: Is there a relationship by type of teacher license (apprentice or professional) between the TVAAS growth score given by the Tennessee Department of education and the overall TEAM observation rating for teachers in grades 3 through 8 in the participating county public school system?

H₀3: The relationship by type of teacher license (apprentice or professional) between the TVAAS growth score given by the Tennessee Department of Education and the overall TEAM observation rating for teachers in grades 3 through 8 in the participating county public school system is not different from neutral.

Research Hypothesis 4: Is there a relationship by grade level taught (elementary or secondary) between the TVAAS growth score given by the Tennessee Department of education and the overall TEAM observation rating for teachers in grades 3 through 8 in the participating county public school system?

H₀4: The relationship by grade level (elementary or secondary) between the TVAAS growth score given by the Tennessee Department of Education and the overall

TEAM observation rating for teachers in grades 3 through 8 in the participating county public school system is not different from neutral.

Research Hypothesis 5: Is there a relationship by years of experience of the administrator (1 year experience, 2 to 4 years experience, 5 to 10 years experience, 11 or more years experience) between the TVAAS growth score given by the Tennessee Department of education and the overall TEAM observation rating for teachers in grades 3 through 8 in the participating county public school system?

H₀5: The relationship by years of experience of the administrator (1 year experience, 2 to 4 years experience, 5 to 10 years experience, 11 or more years experience) between the TVAAS growth score given by the Tennessee Department of Education and the overall TEAM observation rating for teachers in grades 3 through 8 in the participating county public school system is not different from neutral.

Data Analysis

Data from this research were analyzed through a nonexperimental quantitative methodology. *Statistical Package for Social Sciences (SPSS)* Version 22.0 data analysis software was used for all data analysis procedures in this study. The data sources that were analyzed included data retrieved from the Tennessee Department of Education and the Sullivan County School System.

Research questions 1 through 5 had corresponding null hypotheses. Research questions 1 through 5 were analyzed with a series of single ANOVA tests summarizing the discrepancies between the expected number of times each outcome occurs (assuming

that the model is true) and the observed number of times each outcome occurs, by summing the squares of the discrepancies, normalized by the expected numbers, over all the categories. All data were analyzed at .05 level of significance. Findings of the data analyses are presented in Chapter 4. A summary of the findings, conclusions, and recommendations for future research are presented in Chapter 5.

Summary

Chapter 3 reported the methodology and procedures for conducting the study. After a brief introduction, a description of the research design, selection of the population, the data collection procedures, research questions, null hypotheses, and the consequent data analysis procedures were defined.

CHAPTER 4

ANALYSIS OF RESEARCH QUESTIONS

The purpose of this study was to investigate the relationship between the TVAAS growth scores given by the Tennessee Department of Education using the Sanders formula for determining value-added gains and the overall Tennessee Educator Assessment Model (TEAM) observation rating for teachers in grades 3 through 8 in the participating county school system. Participants of this study included 240 teachers in grades 3 through 8 during the 2012-2013 school year.

In this chapter data are presented and analyzed to answer 5 research questions and 5 null hypotheses. A compilation of teacher-specific data was analyzed using the SPSS Software package.

Research Question 1

Research Question 1: Is there a positive relationship between the TVAAS growth score given by the Tennessee Department of Education and the overall TEAM observation rating for teachers in grades 3 through 8 in the participating county public school system?

H₀1: The relationship between the growth score given by the Tennessee Department of Education and the overall TEAM observation rating for teachers in grades 3 through 8 in the participating county public school system is not different from neutral.

A Pearson correlation coefficient was computed to test the relationship between TEAM Observation scores and TVAAS growth score given to 240 teachers in the participating county school system in grades 3 through 8. The results of the correlational analysis

revealed a weak positive relationship between Observation ($M = 4.05$, $SD = .47$) and Effectiveness ($M = 3.41$, $SD = 1.49$) scores and a statistically significant correlation [$r(238) = .28$, $p < .010$; $r^2 = .08$]. Therefore, the null is rejected. In general and when taking into account the r^2 data the results indicate that 8% of the variance of the variables is explained by their relationship, leaving 92% of the variance determined by other factors leaving a weak relationship. Figure 1 displays the bivariate scatterplot.

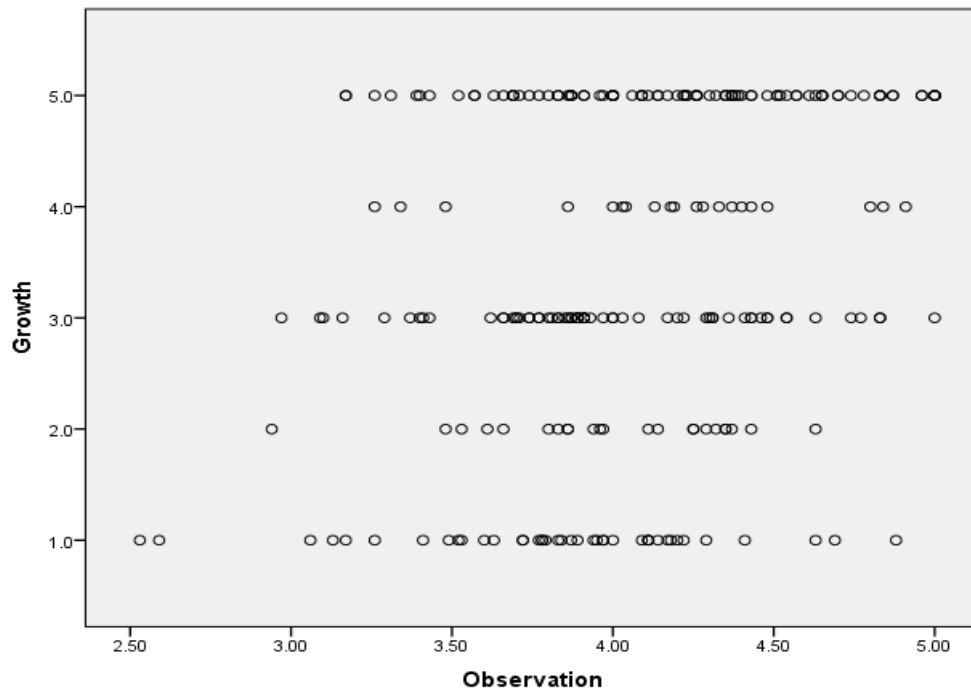


Figure 2. Scatterplot matrix between TEAM observation scores and TVAAS growth scores.

Research Question 2

Research Question 2: Is there a significant relationship by gender (male or female) between the TVAAS growth score given by the Tennessee Department of

Education and the overall TEAM observation rating for teachers in grades 3 through 8 in the participating county public school system?

H₀2: The relationship by gender (male or female) between the TVAAS growth score given by the Tennessee Department of Education and the overall TEAM observation rating for teachers in grades 3 through 8 in the participating county public school system is not different from neutral.

A one-way multivariate analysis of variance (MANOVA) was conducted to determine the relationship of the gender (male, female) of the teacher to the two dependent variables, observation scores and growth scores. There was no significant relationship found between the gender of the teacher and the dependent variables of TVAAS growth scores and TEAM observation scores, Wilks' $\lambda = .98$, $F(2, 476) = 2.40$, $p = .090$. Figure 2 represents a boxplot of the results for observation and growth scores in relationship to the gender of the teacher. The multivariate η^2 based on Wilks' λ was .02. Table 1 contains the means and standard deviations on the dependent variables and the gender of the teacher.

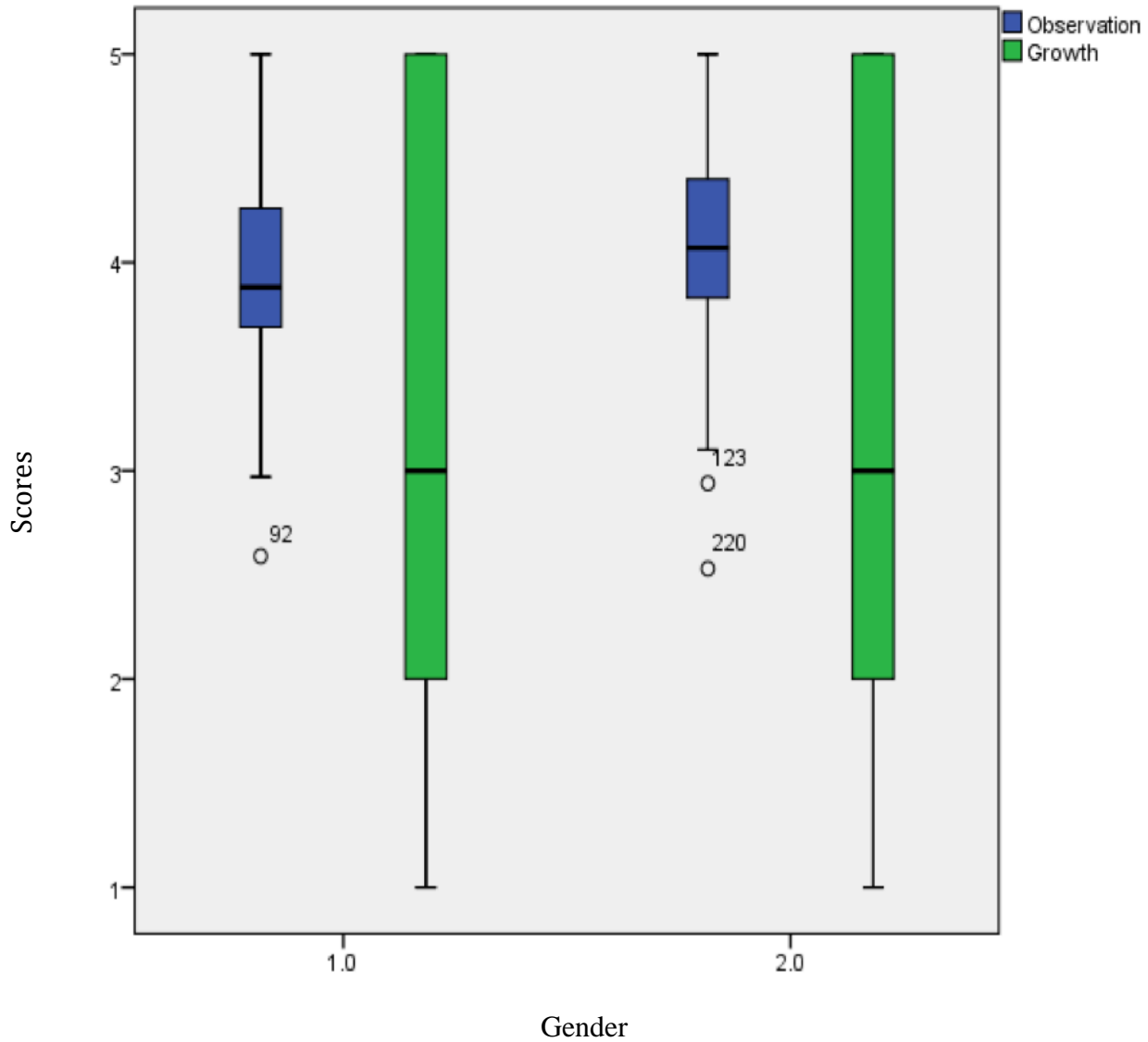


Figure 3. Distributions of TEAM observation scores and TVAAS growth scores for the two classes of gender, male and female.

Note: 0 = 1 to 1.5 Standard Deviations

Table 1

Means and Standard Deviations on the Dependent Variables for Gender

Gender	N	TEAM Observation		TVAAS Growth	
		M	SD	M	SD
Male	42	3.91	.07	3.35	.23
Female	198	4.08	.03	3.42	.10
Total	240				

Research Question 3

Research Question 3: Is there a significant relationship by license type (apprentice or professional) between the TVAAS growth score given by the Tennessee Department of Education and the overall TEAM observation rating for teachers in grades 3 through 8 in the participating county public school system?

H₀3: The relationship by type of teacher license (apprentice or professional) between the TVAAS growth score given by the Tennessee Department of Education and the overall TEAM observation rating for teachers in grades 3 through 8 in the participating county public school system is not different from neutral.

A one-way multivariate analysis of variance (MANOVA) was conducted to determine the effect of license types (apprentice or professional) on the two dependent variables, observation scores and growth scores. A statistically significant difference was found among license type and the dependent variables, Wilks' $\lambda = .94$, $F(2, 476) = 7.58$, $p = .001$. Figure 3 represents a boxplot of the results for observation and growth scores in relationship to license type. The multivariate η^2 based on Wilks' λ was .06. Table 2 contains the means and standard deviations on the dependent variables of license type.

Analyses of variances (ANOVA) on the dependent variables (observation, growth) were conducted as follow-up tests to the MANOVA. Using the Bonferroni method, each ANOVA was tested at the .025 level. The ANOVA for license type in observation scores were found to be statistically significant, $F(1, 238) = 9.72, p = .002, \eta^2 = .04$, and the ANOVA for license type on growth scores was also statistically significant, $F(1, 238) = 9.35, p = .002, \eta^2 = .038$. Therefore, the null hypothesis was rejected.

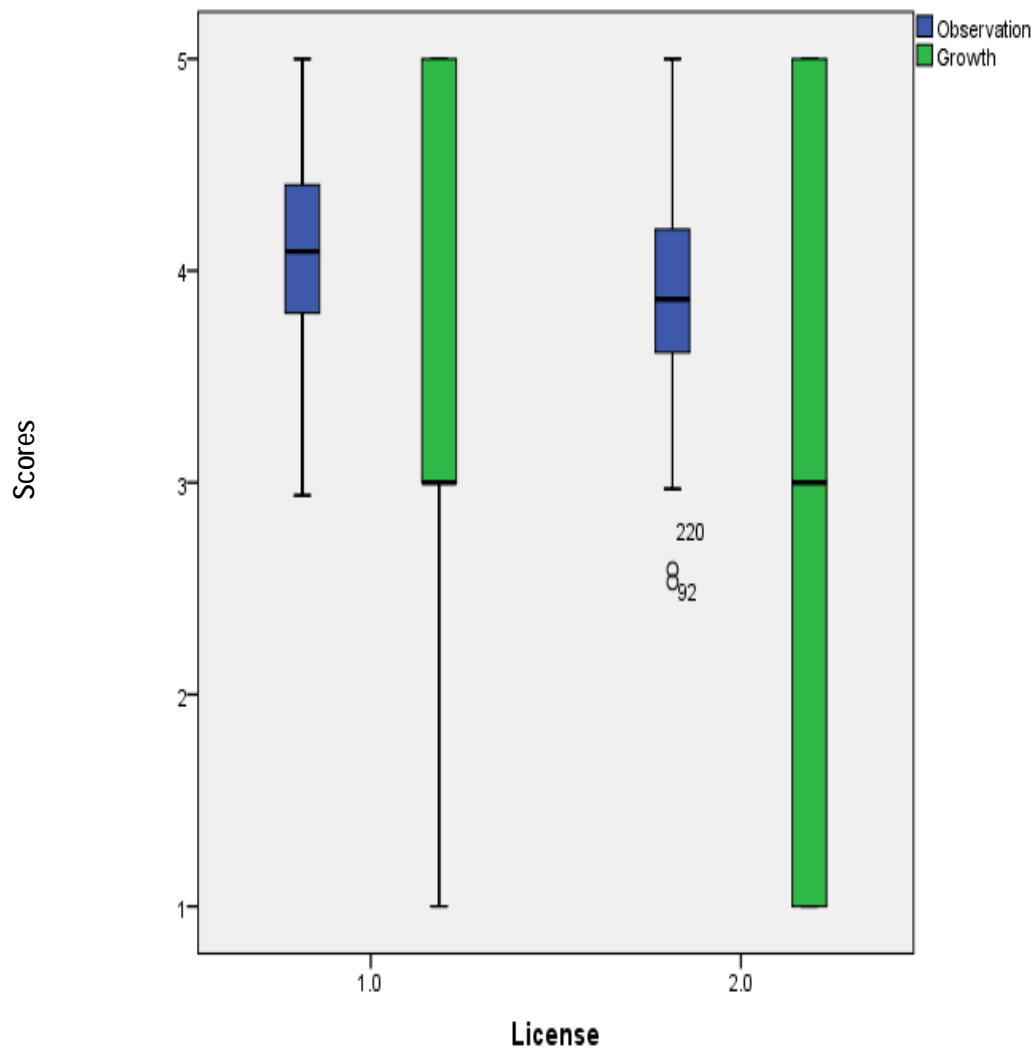


Figure 4. Distributions of TEAM observation scores and TVAAS growth scores for the two types of license, 1 (Professional) and 2 (Apprentice)

Note: 0 = 1 to 1.5 Standard Deviations

Table 2

Means and Standard Deviations on the Dependent Variables for License Type

License	N	TEAM Observation		TVAAS Growth	
		M	SD	M	SD
Professional License	204	4.09	.46	3.53	1.43
Apprentice License	36	3.83	.51	2.72	1.67
Total	240				

Research Question 4

Research Question 4: Is there a significant relationship by the socioeconomic status of the school (Title I status or Non-Title I status) between the TVAAS growth score given by the Tennessee Department of Education and the overall TEAM observation rating for teachers in grades 3 through 8 in the participating county school system?

H₀4: The relationship by the socioeconomic status of the school (Title I status or Non-Title I status) between the TVAAS growth score given by the Tennessee Department of Education and the overall TEAM observation rating for teachers in grades 3 through 8 in the participating county public school system is not different from neutral.

A one-way multivariate analysis of variance (MANOVA) was conducted to determine the relationship of the school's socioeconomic status on the two dependent variables, observation scores and growth scores. No significant difference was found among the socioeconomic status of the school and the dependent variables, Wilks's $\lambda = .99$, $F(2, 476) = .58$, $p = .557$. Figure 4 represents a boxplot of the results for observation and growth scores in relationship to the school's socioeconomic status. The multivariate

.² based on Wilks' λ was .01. Table 3 contains the means and standard deviations on the dependent variables of socioeconomic status of the school.

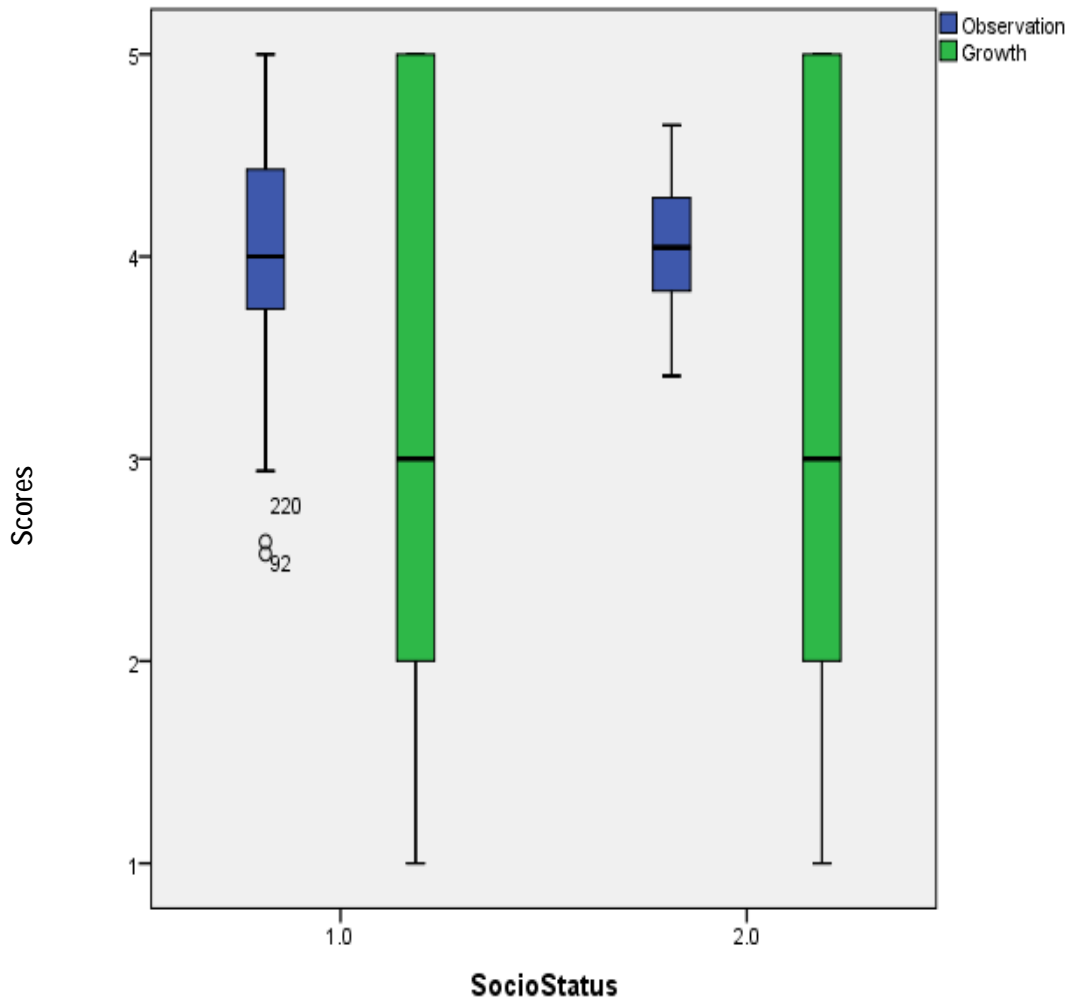


Figure 5. Distributions of TEAM observation scores and TVAAS growth scores for the school's socioeconomic status, 1 (Title I Status) or 2 (Non-Title I Status)

Note: 0 = 1 to 1.5 Standard Deviations

Table 3

Means and Standard Deviations on the Dependent Variables for Socioeconomic Status

SocioStatus	N	TEAM Observation		TVAAS Growth	
		M	SD	M	SD
Title I Status	186	4.06	.51	3.47	1.49
Non-Title I Status	54	4.05	.31	3.22	1.53
Total	240				

Research Question 5

Research Question 5: Is there a significant relationship by the experience of the administrator (1 year experience, 2 to 4 years experience, 5 to 10 years experience, 11 or more years experience) between the TVAAS growth score given by the Tennessee Department of Education and the overall TEAM observation rating for teachers in grades 3 through 8 in the participating county school system?

H₀5: The relationship by years of experience of the administrator (1 year experience, 2 to 4 years experience, 5 to 10 years experience, 11 or more years experience) between the TVAAS growth score given by the Tennessee Department of Education and the overall TEAM observation rating for teachers in grades 3 through 8 in the participating county public school system is not different from neutral.

A one-way multivariate analysis of variance (MANOVA) was conducted to determine the effect of experience of the administrator on the two dependent variables, observation scores and growth scores. A statistically significant difference was found among the experience of the administrator and the dependent variables, Wilks's $\lambda = .87$, $F(2, 476) =$

5.84, $p < .001$. Figure 5 represents a boxplot of the results for observation and growth scores in relationship to the experience of the administrator. The multivariate η^2 based on Wilks' λ was .07. Table 4 contains the means and standard deviations on the dependent variables of the experience of the administrator. Therefore, the null hypothesis was rejected.

Analyses of variances (ANOVA) on the dependent variables (observation, growth) were conducted as follow-up tests to the MANOVA. Using the Bonferroni method, each ANOVA was tested at the .025 level. The ANOVA for experience of administrator in observation scores was found to be statistically significant, $F(1, 238) = 11.96, p < .001, \eta^2 = .13$, and the ANOVA for the experience of the administrator on growth scores was not statistically significant, $F(1, 238) = .68, p = .566, \eta^2 < .01$.

Post hoc analyses to the univariate ANOVA for the observation scores consisted of conducting pairwise comparisons to find which level experience of the administrator was significantly related to observation scores. Each pairwise comparison was tested at the .025 divided by 3 or .008 level. The administrators with 11 or more years experience group produced significantly higher TEAM observation scores compared to each of the other three groups of administrators ($p < .001$). There was no significant difference with any of the other groups of administrators.

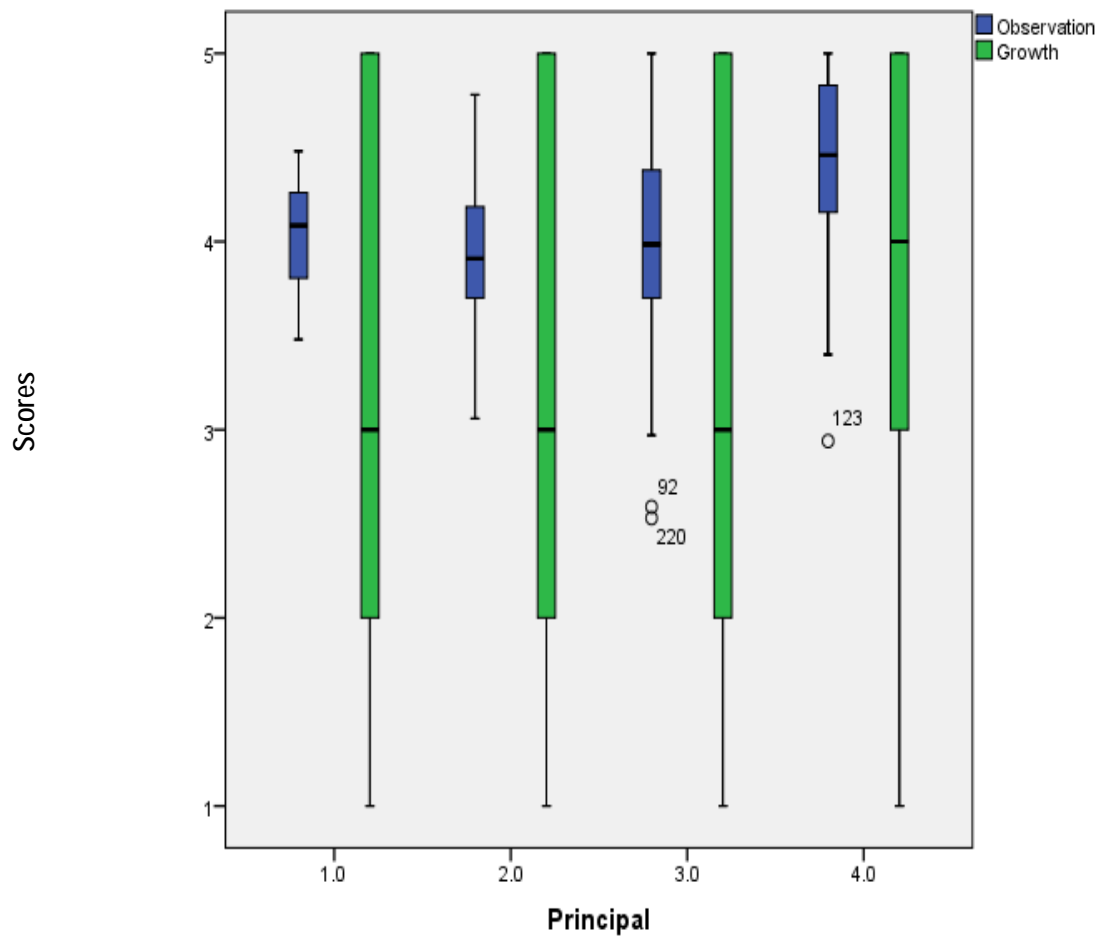


Figure 6. Distributions of TEAM observation scores and TVAAS growth scores for the experience of the school administrator, 1 (New Administrator), 2 (2 to 4 years experience), 3 (5 to 10 years experience), 4 (More than 10 years experience).

Note: 0 = 1 to 1.5 Standard Deviations

Table 4

Means and Standard Deviations on the Dependent Variables for Experience of Principal

Years Experience	<i>N</i>	TEAM Observation		TVAAS Growth	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
0	25	4.05	.28	3.25	1.48
Years Experience					
2-4	71	3.93	.38	3.38	1.52
Years Experience					
5-10	102	4.00	.51	3.35	1.49
Years Experience					
11 or more	42	4.41	.46	3.70	1.47
Years Experience					
Total	240				

Summary

In this chapter data obtained from teachers in grades 3 through 8 in the participating county school system during the 2012-2013 school year were presented and analyzed. There were 5 research questions and 5 null hypotheses. All data were collected from the school system with no names or other identifying information attached. All teachers (N=240) in grades 3 through 8 were used for the purpose of this research.

CHAPTER 5

SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS FOR FURTHER PRACTICE AND FURTHER RESEARCH

This chapter contains the findings, conclusions, and recommendations for readers who may use the results as a resource when reviewing, revising, and adapting teacher evaluation systems. The purpose of this study was to investigate the relationship between the TVAAS growth score given by the Tennessee Department of Education and the overall Tennessee Educator Assessment Model (TEAM) observation rating for teachers in grades 3 through 8 in the participating county public school system. The study was conducted using data retrieved from the participating public school system using teacher effect data from the 2012-2013 school year.

Summary of the Study

The statistical analysis reported in the study was based on five research questions presented in Chapters 1 and 3. Each research question had one null hypothesis. Research question 1 was analyzed using a Pearson r correlation. Research questions 2 through 5 were analyzed using a one-way MANOVA. The total number of participants in this study from the participating public school system in Tennessee was 240 teachers. The level of significance used in each test was .05. Findings indicated that there was a weak positive relationship between the overall TEAM observation score given by administrators to teachers and the effectiveness or growth score given to teachers by the state based upon students test scores. In short, this study found for this population a weak positive relationship between the scores given by administrators to teachers using the TEAM

observation model and the TVAAS growth score given to teachers by the Tennessee Department of Education.

The study also investigated the following variables to determine if they had a statistically significant difference on the overall study: gender of the teacher, license type of teacher, socioeconomic status of school, experience level of administrator. No significant difference was found for the gender of the teacher or the socioeconomic status of the school. There was a significant difference found for the license type of the teacher and for the experience level of the administrator. The study found a difference between the two types of teacher license in Tennessee: apprentice and professional. Higher observation and effectiveness scores were typically found in more professional-licensed teachers. The study also found a statistical difference in TEAM Observation Scores and Effectiveness Ratings segregated into the experience level of the administrator. In short, the study found that typically the more experienced the administrator the closer the relationship was to the overall TEAM Observation Scores and Effectiveness Rating.

Findings

This research study was focused on five research questions. The five questions and findings are discussed below.

Research Question 1

Is there a positive relationship between the TVAAS growth score given by the Tennessee Department of Education and the overall TEAM observation rating for teachers in grades 3 through 8 in the participating county public school system?

The results of the correlational analysis revealed a weak positive relationship between the growth score, also known as the Level of Effectiveness, and the TEAM observation score. In general, the research found for this group of participants that teachers with higher TEAM observation scores also had slightly higher TVAAS growth scores.

Research Question 2

Is there a significant relationship by gender (male or female) between the TVAAS growth score given by the Tennessee Department of Education and the overall TEAM observation rating for teachers in grades 3 through 8 in the participating county public school system?

The results of the one-way multivariate analysis of variance suggest no significant difference was found based on the gender of the teacher and the dependent variables of TEAM observation score and TVAAS growth score. Analyses of variances on the dependent variables of growth score and observation score were conducted as follow-up tests and were found to be not significant. Therefore, the null hypothesis is retained.

Research Question 3

Is there a significant relationship by license type (apprentice or professional) between the TVAAS growth score given by the Tennessee Department of Education and the overall TEAM observation rating for teachers in grades 3 through 8 in the participating county public school system?

A one-way multivariate analysis of variance (MANOVA) was conducted to determine the effect of license types on the two dependent variables and suggest a significant difference in the dependent variables based on license type. Analyses of variances (ANOVA) on the dependent variables were conducted as follow-up tests to the MANOVA. The ANOVA for license type in both dependent variables were found to be statistically significant with professionally licensed teachers having higher TEAM Observation ratings and higher growth scores given by the Tennessee Department of Education than apprentice licensed teachers.

Research Question 4

Is there a significant relationship by the socioeconomic status of the school (Title I status or NonTitle I status) between the TVAAS growth score given by the Tennessee Department of Education and the overall TEAM observation rating for teachers in grades 3 through 8 in the participating county public school system?

A one-way multivariate analysis of variance (MANOVA) was conducted to determine the effect of the school's socioeconomic status on the two dependent variables. No significant difference was found and the null hypothesis was retained. Analyses of variances (ANOVA) on the dependent variables were conducted as follow-up tests to the MANOVA. The ANOVA for both dependent variables were found to be not significant.

Research Question 5

Is there a significant relationship by the experience of the administrator (1 year experience, 2 to 4 years experience, 5 to 10 years experience, 11 or more years

experience) between the TVAAS growth score given by the Tennessee Department of Education and the overall TEAM observation rating for teachers in grades 3 through 8 in the participating county public school system?

A one-way multivariate analysis of variance (MANOVA) was conducted to determine the effect of experience of the administrator on the two dependent variables and found a significant difference among the experience levels of the administrator. Analyses of variances (ANOVA) on the dependent variables were conducted as follow-up tests to the MANOVA and both dependent variables were also found to be statistically significant. Administrators with 11 or more years experience tended to give higher observation scores. This was the only group of administrators where higher observation scores were observed.

Conclusions

The purpose of this study was to investigate the relationship between the TVAAS growth score given by the Tennessee Department of Education and the overall Tennessee Educator Assessment Model (TEAM) observation rating for teachers in grades 3 through 8 in the participating county public school system. Specifically, this research assessed the relationship between observation scores given to teachers by administrators and the TVAAS growth score given to teachers by the Tennessee Department of Education based upon student achievement results on the Tennessee Comprehensive Assessment Program.

The following conclusions were based upon the findings from the data of this study:

1. A weak positive relationship was found between the TVAAS growth score given by the Tennessee Department of Education and the overall TEAM

observation rating for an individual teacher in grades 3 through 8 in the participating school system. This weak positive relationship did agree with research that demonstrated one of the critical factors in student achievement is the quality of the teacher. Marzano (2001) identified nine instructional strategies of classroom instruction that positively impacted student achievement. The TEAM observation rubric has all nine of those components listed throughout the indicators of evaluating teacher performance. With this in mind, it can be suggested that a higher score on the TEAM rubric increases student achievement because the performance indicators found in the TEAM rubric are linked to Marzano's nine instructional strategies for classroom instruction that improve student achievement.

2. No significant difference based on gender was found between the dependent variables of TVAAS growth score given by the Tennessee Department of Education and the overall TEAM observation rating for an individual teacher in grades 3 through 8 in the participating county school system. This finding is the same as what is found in the literature. Winters et al. (2013) found no statistically distinguishable relationship between the gender of teachers and student achievement.
3. A statistically significant difference was found for license type for both dependent variables. This finding was contradictory for what was found in other research. Al-bakr and Wiseman (2013) found neither a direct nor a consistent association between teacher certification and student

achievement. Further study in this area would be recommended to determine if there in fact was a relationship in Tennessee between teachers with an Apprentice teaching license and a Professional teaching license.

4. No significant relationship was found between the socioeconomic status of the school and the dependent variables. Many educators and administrators attempt to link both direct and indirect factors of socioeconomic status of school to student achievement. Payne (2008) noted some of those indirect factors of poverty that affect student achievement as formal registry and language, relationships, and cultural differences. Direct linkage and causes of poverty on student achievement have not been found or are at least vague or not specific. Lam (2013) found that while socioeconomic status and academic performance appeared to be influential in early and middle childhood, the effect of poverty on student achievement wanes in importance during adolescence to the point it does not exhibit a relationship. Recent longitudinal studies involving the impact of the federal preschool program, HEADSTART, suggested the same results as student achievement measures yielded no variances beyond upper elementary school.
5. A one-way multivariate analysis of variance based on levels of experience found a statistically significant difference between the dependent variables of growth scores and TEAM observation ratings. Further examination using the Bonferroni method revealed a mixed result as it found a statistically significant relationship between the experience of the

administrator and the TEAM observation scores but found no difference between the experience of the administrator and growth scores. The research found that administrators with 11 or more years of administrative experience had a higher mean TEAM observation score, $M=4.41$, than beginning administrators, $M=4.05$, administrators with 2 to 4 years experience, $M=3.93$, and administrators with 5 to 10 years experience, $M=4.00$. Because the sample size of administrators is so small in this study, it is recommended that more data be collected to determine the significance of the experience of the administrator on student growth scores and the TEAM observation ratings. Further study is also suggested to examine if the relationship between more experienced administrators and teachers impacted the results of this study. The Tukey test revealed that administrators with 11 or more years experience tended to have higher TEAM observation scores.

Recommendations for Practice

The findings and conclusions of this research have identified the following recommendations for practice for future use and study:

1. Administrators and teachers should note that there is a weak positive relationship between TEAM observation scores and the effectiveness rating given by the Tennessee Department of Education. Administrators should communicate this finding to teachers so that they can examine and monitor their practice related to student achievement outcomes.

2. These findings can be reported and discussed with the entire administrative team in the participating public school system. This will allow collaborative dialogue about the positive relationship between effective teacher practices that encompass the TEAM observation rubric and student achievement.
3. Administrators should identify and use those effective teachers with professional teacher licenses and pair them with teachers with the apprentice teacher licenses to help and assist their professional growth.
4. More information and a deeper understanding of the Tennessee Value-Added Assessment System should be discussed with teachers and administrators on the positive and negative features of using value-added data to determine teacher pay, tenure, and employment.
5. A survey of experienced administrators and their schools could be examined to try to determine why administrators with 11 or more years of experience tended to give scores that were more closely related to student test scores. This was the only group of administrators found in this study that yielded higher observation scores. Research could examine the role of extended relationships and how that effects the observation of teachers. Additional information could also be gathered to determine if previous evaluation systems had any effect on TEAM observation scores because they have only been used for 3 years and the administrator has been evaluating teachers for 11 or more years.

Recommendations for Further Research

Results of this study indicate a weak positive relationship between TEAM observation scores given to teachers by administrators and the TVAAS growth score

given to teachers by the Tennessee Department of Education based on student achievement data. Recommendation for future research includes a replication of this study using a data set beyond the 2012-2013 school year. In the spring of 2013 Tennessee Commissioner of Education Kevin Huffman reported to school districts across the state that the Department of Education would be releasing a numerical rating system indicating how closely aligned an administrator's TEAM observation scores were to the overall achievement scores of students on the Tennessee Comprehensive Assessment Program using the Tennessee Value-Added System to determine an effectiveness rating. Administrators were told that scores of 0 would indicate close alignment while positive or negative scores would indicate how far above or below the growth scores of the reported observation scores. The data set used in this study included TEAM observation scores without knowledge of this new reporting tool by the Department of Education. Future data sets will include the knowledge of this reporting tool and the examination of closely aligned TEAM observation scores to student achievement scores. A future study could be compared to this study to determine if the knowledge of this reporting tool by the Department of Education yielded different results on the overall TEAM observation scores given by administrators to teachers.

Recommendation for future research also includes replicating this study with a different public school system. The Sullivan County School System was used for this study and the results could be compared with both systems in the surrounding area and those from other parts of the state to compare the data sets to determine if a weak positive relationship continued to exist between TEAM observation scores and TVAAS growth scores.

Recommendation for future research also includes the addition of more teacher data included with these data. As other studies occur and are examined, the data can be combined to create a larger sample to examine the same questions used in this research. Continuing to add to this data set will continue to create a larger database that can be used to examine the TEAM observation model and the Tennessee Value-Added Assessment System.

Finally, it is recommended that further research be completed to examine the amount of time administrator's have spent with teachers to determine if that has an effect on the overall TEAM observation scores. This study found that administrators with 11 or more years experience tended to give higher TEAM observation scores. More study needs to be done to determine if the amount of time an administrator spends with teachers could have impacted the TEAM observation scores.

Summary

The emergence of a global economy has created an environment of constant change in America's public education system. The state of Tennessee has made several changes over the past several years in response and the increased emphasis on testing and accountability. Changes to Tennessee's teacher evaluation model include the adoption of the Tennessee Educator Accelerator Model (TEAM) and the incorporation of student achievement and growth data into a teacher's overall annual evaluation. This study examined the relationship between the TEAM observation score and the TVAAS growth score given to teachers by the Tennessee Department of Education based upon student achievement and growth scores to determine if there was a relationship. This study found a weak positive relationship between the TEAM observation score the TVAAS growth

score. Further research is suggested to examine other public school systems in Tennessee to determine if the results are specific to the participating public school system and to increase the total population of scores examined. There was also noted concern regarding the Tennessee Value-Added Assessment System (TVAAS) and the validity of producing student growth scores from state achievement measures with the formula of TVAAS unknown to the public. This set of data was important, however, because it was produced prior to the announcement from the Tennessee Department of Education that it would compare the TEAM observation score and student TVAAS growth scores and there should be a correlation between the two sets of data. A numerical score would be given to every school noting this correlation. Also recommended are additional studies to determine if data sets after the 2012-2013 yielded different results due to the announcement by the Tennessee Department of Education that there should be a relationship between a teacher's TVAAS growth score and his or her overall TEAM observation score.

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APPENDICES APPENDIX A

SUGGESTED TEAM EVALUATION PACING GUIDE

Suggested Observation Pacing

For year 3, the minimum required number of observations will be based on licensure status **and** evaluation scores from the previous year.

- **Coaching Conversations** – As the school year begins, it is important for evaluators to have a targeted conversation with teachers who scored a 1 on their overall evaluation or individual growth score about the number of required observations and what supports they will receive this year to improve student achievement. These initial coaching conversations should take place before the first official observation of the year.
- **Observing Multiple Domains During One Classroom Visit** – Districts may choose to observe the instruction domain during the same classroom visit as either the planning domain or environment domain. The observation pacing charts below reflect one possible way domain observations may be combined during classroom visits.
- **Announced vs. Unannounced Visits** – At least half of domains observed must be unannounced, but it is the district's discretion to have more than half of domains observed unannounced.

All teachers scoring 1 on overall evaluation or individual growth scores	Apprentice teachers scoring 2-4 on their overall evaluation score and neither a 1 nor 5 on their individual growth score	Professional teachers scoring 2-4 on their overall evaluation score and neither a 1 nor 5 on their individual growth score	All teachers scoring 5 on overall evaluation or individual growth scores
Beginning of the school year	Beginning of the school year	Beginning of the school year	Beginning of the school year
<i>Initial Coaching Conversation</i>			
1 Unannounced Visit	1 Announced Visit	1 Announced Visit	1 Unannounced Visit
1 Instructional 1 Planning	1 Instructional 1 Planning	1 Instructional 1 Planning	1 Instructional 1 Environment 1 Planning
1 Announced Visit	1 Unannounced Visit		
1 Instructional 1 Environment	1 Instructional 1 Environment		
End of semester	End of semester	End of semester	End of Semester
1 Announced Visit	1 Announced Visit	1 Unannounced Visit	1 Walkthrough
1 Planning	1 Planning	1 Instructional 1 Environment	
1 Unannounced Visit	1 Unannounced Visit		1 Walkthrough
1 Instructional 1 Environment	1 Instructional 1 Environment		
Professionalism Scoring	Professionalism Scoring	Professionalism Scoring	Professionalism Scoring
End of year	End of year	End of year	End of Year

Keywords: Teacher Evaluation, TVAAS, First to the Top

APPENDIX B

ACHIEVEMENT MEASURE WORKSHEET



ACHIEVEMENT MEASURE WORKSHEET

Educator Name _____
Position _____

School Name _____

To be completed at fall conference

Part A: Approved Achievement Measures (Check One)	
State Assessments (discipline-specific/TCAP)	
School-Wide TVAAS	
ACT/SAT Suite of Assessments	
"Off the Shelf" Assessments (commonly used throughout the state and/or nationally)	
AP/IB/NIC Suites of Assessments	
Graduation Rate	

**For a detailed list of the Achievement Measure Types within each Approved Achievement Measure, see the following pages.*

*For an approved list of options by educator group, see the Approved Achievement Measure Matrix.
http://team-tn.org/assets/educator-resources/Approved_Achievement_Measures_Matrix.pdf*

Part B: Chosen Measure and Rationale*:

Achievement Score	Measurable Criteria to Meet Effectiveness Rating ¹ To be completed by Administrator and Teacher
1	
2	
3	
4	
5	

For additional guidance on the setting of achievement levels, see guidance documents.

¹*Data for the chosen measure must be quantifiable.*

°Educator Signature: _____

Date: _____

Evaluator Signature: _____

Date: _____

To be completed prior to the summative conference

Part C: Summative Effectiveness Rating (For Evaluator Use Only)

Achievement Measure Outcome (On Measure Selected Above)

Final Achievement Score: _____

°Educator Signature: _____

Evaluator Signature: _____

Date: _____

**Signatures indicate that the information contained in this document has been discussed.*

**When current year data is released, if a teacher has an individual growth score of a 3, 4, or 5 and that score is higher than the achievement score, the individual growth score will automatically replace the achievement score when final scores are submitted.*

APPENDIX C

CALCULATING TENNESSEE LEVEL OF EFFECTIVENESS



Guidance on Overall Level of Effectiveness Calculations

Due to legislative changes made during the 2013 legislative sessions, the calculations for overall levels of effectiveness starting with the 2012-13 school year will depend on whether a teacher has an individual growth score or a school- or system-wide growth score. The examples below show how the overall level of effectiveness would be calculated for a tested teacher with individual growth or for a non-tested teacher with a school- or system-wide growth score. Please note that all teachers who receive an individual growth score **must** use their individual growth score. **This guidance is for informational purposes only. The calculation of overall levels of effectiveness will be done automatically in CODE.**

➤ Calculations for Teachers with Individual Growth:

Overall Level of Effectiveness Calculation					
Overall Observation Score*:	_____	x	50	=	_____
Growth Score:	_____	x	35	=	_____
Achievement Measure Score:	_____	x	15	=	_____
				Sum Lines	
Total Score			100%	1-3	_____

*This is the average of all scored indicators. Scores on the Professionalism Domain are included in the Overall Observation Score. This overall score is rounded to the hundredths place.

➤ Calculations for Teachers with School- or System-Wide Growth:

Overall Level of Effectiveness Calculation					
Overall Observation Score*:	_____	x	60	=	_____
Growth Score:	_____	x	25	=	_____
Achievement Measure Score:	_____	x	15	=	_____
				Sum Lines	
Total Score			100%	1-3	_____

*This is the average of all scored indicators. Scores on the Professionalism Domain are included in the Overall Observation Score. This overall score is rounded to the hundredths place.

- **Converting to Overall Level of Effectiveness:** For tested teachers with individual growth and non-tested teachers with school- or system-wide growth, the total score is then converted to an overall effectiveness rating using the following table:

Score Range	Overall Effectiveness Rating
<200	1
200-274.99	2
275-349.99	3
350-424.99	4
425-500	5

- **Example Calculation for a Tested Teacher with Individual Growth**

Teacher	Individual Growth	Achievement	Average Observation	Total Score	Overall Level of Effectiveness
Sally Smith	4	5	3.8	405	4

Individual Growth Score: $4 \times 35 = 140$

Achievement Score: $5 \times 15 = 75$

Average Observation Score: $3.8 \times 50 = 190$

Total Score: 405

Level of Effectiveness: 4

- **Example Calculation for a Non-Tested Teacher with School-Wide Growth**

Teacher	School-Wide Growth	Achievement	Average Observation	Total Score	Overall Level of Effectiveness
John Johnson	5	5	3.2	392	4

Individual Growth Score: $5 \times 25 = 125$

Achievement Score: $5 \times 15 = 75$

Average Observation Score: $3.2 \times 60 = 192$

Total Score: 392

Level of Effectiveness: 4

Revised 5/14/13

➤ **Teacher Effectiveness Descriptors**

Significantly Above Expectations (425-500): A teacher at this level exemplifies the instructional skills, knowledge, and responsibilities described in the rubric, and implements them without fail. He/she is adept at using data to set and reach ambitious teaching and learning goals. He/she makes a significant impact on student achievement and should be considered a model of exemplary teaching.

Above Expectations (350-424.99): A teacher at this level comprehends the instructional skills, knowledge, and responsibilities described in the rubric and implements them consistently. He/she is skilled at using data to set and reach appropriate teaching and learning goals and makes a strong impact on student achievement.

At Expectations (275-349.99): A teacher at this level understands and implements most of the instructional skills, knowledge, and responsibilities described in the rubric. He/she uses data to set and reach teaching and learning goals and makes the expected impact on student achievement.

Below Expectations (200-274.99): A teacher at this level demonstrates some knowledge of the instructional skills, knowledge, and responsibilities described in the rubric, but implements them inconsistently. He/she may struggle to use data to set and reach appropriate teaching and learning goals. His/her impact on student achievement is less than expected.

Significantly Below Expectations (Under 200): A teacher at this level has limited knowledge of the instructional skills, knowledge, and responsibilities described in the rubric, and struggles to implement them. He/she makes little attempt to use data to set and reach appropriate teaching and learning goals, and has little to no impact on student achievement.

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