THE INFLUENCE OF TEACHER EFFECTIVENESS ON STUDENT

ACHIEVEMENT: A CASE STUDY

by

Linda Marie Rogers

Liberty University

A Dissertation Presented in Partial Fulfillment

Of the Requirements for the Degree

Doctor of Education

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ABSTRACT

The purpose of this qualitative case study was to explore the perceptions and professional practices of 15 middle school teachers regarding teacher effectiveness and the influence on student achievement. The five research questions that guided this study aligned with the Georgia Department of Education five domains of teacher effectiveness: planning, instructional delivery, assessment, learning environment, and communication. This study implemented the qualitative case study design. The research was conducted in four middle schools in a school district in Georgia. The research used individual interviews, focus group interviews, and a prearranged classroom observation. The cross-case synthesis analysis method was implemented to find patterns and themes that were used to explain the phenomenon being studied. The data analysis involved segmenting the database, developing categories, coding segments, grouping category segments and drawing conclusions. Future research studies on teacher effectiveness and the influence on student achievement should include special education teacher participants.

Key Words: Race to the Top, Teacher Keys Effectiveness System, Teacher Effectiveness Measure, Teacher Assessment on Performance Standards, Student Growth Model, and Student Perception Survey

Dedication Page

This doctoral dissertation is dedicated to God from whom all blessings flow. In addition, I am eternally grateful for the support of my family. To my Dad I am thankful for the encouragement that you gave me to seek wisdom and knowledge, beauty and love. To my Mom for always supporting and believing in the importance of higher education. To our two wonderful sons, Kyle and Michael, thank you for your encouragement and love. Most of all, to my best friend and husband of thirty-four years, Craig (CJ) Rogers, without your inspiration, love and belief in me, this dream would never have been fulfilled.

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List of Abbreviations

Adequate Yearly Progress (AYP)

American Recovery and Re-Investment Act (ARRA)

Bring Your Own Device (BYOD)

College, Career Readiness Performance Index (CCRPI)

Elementary and Secondary Education Act (ESEA)

Every Student Succeeds Act (ESSA)

Georgia Department of Education (GDOE)

Georgia Student Growth Model (GSGM)

National Governor's Association (NGA)

No Child Left Behind Act (NCLB)

Race to the Top (RTTT)

State Longitudinal Data System (SLDS)

Teacher Assessment on Performance Standards (TAPS)

Teacher Effectiveness Measure (TEM)

Teacher Keys Effectiveness System (TKES)

The Council of Chief State School Officers (CCSSO)

State Longitudinal Data System (SLDS)

CHAPTER ONE: INTRODUCTION

Overview

Seismic public school reform has created substantial change to the current educational

landscape in Georgia (Georgia Department of Education, 2013). Chapter one summarized the

Race to the Top federal grant and the influence it has on school reform initiatives in Georgia

(Rickman, 2014). The Widget Effect study provided current research on multi-pronged teacher

evaluations and the influence on student achievement (Kraft & Gilmour, 2017). The Measures of

Effective Teacher Project also provided research on multi-pronged teacher evaluations and the

influence on student achievement (MET Project, 2012). This qualitative case study explored the

perceptions and professional practices of 15 middle school teachers, regarding teacher

effectiveness and the influence on student achievement (Georgia Department of Education,

2013). The ten-teacher performance standards identified on the newly designed, multi-pronged

teacher effectiveness tool used throughout the state of Georgia, was used as a guide for this study

(Georgia Department of Education, 2013). Chapter one included the purpose statement,

significance of the study, research questions, the research plan, delimitations and definitions.

Using qualitative measures, this study may provide insight into how effective teachers impact

student achievement.

Background

A newly designed teacher evaluation instrument, Teacher Keys Effectiveness System

(TKES) became operational in all school districts during the 2014-2015 school year (Georgia

Department of Education, 2014). As outlined in the 2011, Georgia Race to the Top (RTTT)

$400,000,000 federal grant, teacher effectiveness was linked to measures of student achievement

(Georgia Department of Education, 2013). The RTTT grant was a critical driver in closing the

achievement gap which resulted from a desire for economic stability and the need for international competitiveness (US Department of Education, 2013). Linking teacher evaluations to student test scores seemed reasonable to policy makers who argued that teacher compensation and employment decisions should be made in part based on measures of student performance (Everson, Feinauer, & Sudweeks, 2013). The identification of effective and ineffective teachers was at the heart of the Georgia RTTT school reform plan. During the 2010-2011 school year, 24 of Georgia's local education authorities collaborated with the Georgia RTTT plan to pilot (TKES), a three-pronged teacher evaluation system. Research in the area of student surveys was conducted in 2011 in seven school districts as part of Georgia's RTTT initiative (Balch, 2012). By 2014, the last year of the Georgia RTTT grant, local education authorities were required to implement the TKES with fidelity. The TKES included a student growth model score, an in-depth observation tool score, and a student perception survey score. Stronge (2006), synthesized effective teacher characteristics from a meta review of the current literature. The characteristics of effective teachers were categorized into the following four dimensions: (a) Instructional expertise, (b) student assessment, (c) learning environment, and (d) personal qualities of the teacher.

Research on teacher effectiveness and newly designed teacher evaluation systems was led by the Gates Foundation and the Measures of Effective Teacher Project (MET Project, 2010). With the help of 3,000 volunteer teachers over the course of three years, the following three teacher evaluation measures were examined: (a) Classroom observations, (b) student perception surveys, and (c) student achievement gains. The significant lessons learned from the MET study and the work of its partners revealed that student surveys and classroom observations provide meaningful feedback for teachers. In addition, the results of observations and student perceptions

have helped district leaders prioritize professional development to target the biggest gaps in professional practices and district expectations of effective teachers. Rigorous training and certification of evaluators increased trust in the data collected. Student surveys provided the beneficiaries of instruction a reliable voice and rich feedback regarding the learning environment. Finally, a balanced approach was deemed more sensible when weights were assigned to determine the overall teacher evaluation measure.

The Widget Effect, a 2009 report from the New Teacher Project, reported that schools assumed teacher effectiveness to be the same from classroom to classroom and therefore treated teachers as interchangeable parts, a phenomenon known as the "Widget Effect" (Xu, Grant, & Ward, 2016). Kraft and Gilmour (2017) determined that in most school districts less than 1% of teachers were rated as unsatisfactory (Kraft & Gilmour, 2017). The Widget Effect reported school districts ignored performance evaluations all together when making decisions regarding personnel, recruitment, promotion, pay and dismissal (Aldeman, 2017). The teacher evaluation instruments of 14 large school systems were found to be flawed in determining teacher effectiveness (Doherty & Jacobs, 2013).

According to the National Council on Teacher Quality (NCQT), the number of states that required objective measures of student achievement to be included in teacher evaluations nearly tripled from 2009 to 2015 from 15 states to 43 states (Georgia Department of Education, 2013). The number of states that required school districts to consider teacher evaluations in tenure decisions grew from zero to 23 over the same period. By 2015, the number of states that made the student growth model the preponderance criteria of the teacher evaluation grew to 16 states (Aldeman, 2017). Seventeen percent of these states and school districts used student surveys as part of the overall teacher evaluation process (Steinberg & Kraft, 2017). To date, findings

revealed that the percentage of teachers rated as unsatisfactory did not changed in the states that adopted a new teacher evaluation system. However, in most states, under the newly designed teacher evaluation system, classroom observations were more frequent and teachers were rated on multiple performance categories (Kraft & Gilmour, 2017). Newly designed teacher evaluation systems have created controversy and researchers do not agree on the validity of the new teacher evaluation systems and whether they differentiated between effective and ineffective teachers (Xu et al., 2016).

The new information discovered in this study added to the body of knowledge on teacher effectiveness, multi-pronged evaluation systems and the influence of student achievement with the publication of the themes and generalizations. School district leaders, teachers and students will benefit from the research presented in this study on the influence of effective teachers in the area of student achievement.

Problem Statement

Weisberg, Sexton, Mulhern, and Keeling (2009) conducted an extensive study of current teacher evaluation systems and determined 98% of all teachers received an overall rating of satisfactory. The Brookings Brown Center for Task Group on Teacher Quality reported similar findings in that the vast majority of teachers received the same top rating in annual evaluations (Glazerman et al., 2010). A growing national movement for greater teacher accountability called for the implementation of multiple measures to assess teacher performance. A study conducted by the Measures of Effective Teachers funded by the Gates Foundation, advocated the use of the following three metrics to determine teacher effectiveness: (a) Value-added measure, (b) classroom observation, and (c) student perception surveys (Anonymous, 2013). The New

Teacher Project also supported the use of multiple measures to assess teacher performance (Darling-Hammond, Amrein-Beardsley, Haertel, & Rothstein, 2012).

A newly designed, teacher evaluation system as decreed by the Georgia RTTT grant became fully operational in all local school districts during the 2014-2015 school year, which represented an unprecedented change for school administrators and classroom teachers (Georgia Department of Education, 2013). The role of state government in determining teacher effectiveness increased significantly with the implementation of the Teacher Keys Effectiveness System (TKES) in Georgia. Originally, the teacher evaluation system was based on three components, which included a numerical score for the student growth component as measured by the results of standardized testing, a numerical score based on observations conducted by local school administrators, and a numerical score based on the results of student perception surveys. The initial formula used to calculate the teacher effectiveness score included 50% from the results of the student growth model, 25% from the student perception survey and 25% from the observation data. With only 25% of a teacher's overall effectiveness determined at the local level by a school administrator, the teacher evaluation system represented unprecedented change. The Georgia Department of education revised the teacher effectiveness measure to reflect the following formula: 50% student growth model results and 50% observation scores from local school administrators (Georgia Department of Education, 2014). The need for an in-depth case study to better understand teacher effectiveness proved to be beneficial to teachers, school administrators and school district leaders.

Purpose Statement

The purpose of this qualitative case study was to explore the perceptions, feelings and thoughts of 15 middle school teachers regarding the influence on teacher effectiveness as defined

by the five domains and ten performance standards on the Georgia Teacher Assessment of

Performance Standards (TAPS) evaluation tool and the influence on student achievement

(Georgia Department of Education, 2013). This study filled the gap in the research regarding

multi-pronged teacher evaluation systems, teacher effectiveness, and the influence on student

achievement. The results of this study benefited students, teachers, administrators, district

leaders, and other stakeholders within the educational community. This research study reviewed

the practices of 15 teacher participants and examined their perceptions of teacher effectiveness

and the influence on student achievement. The participants selected for the study confirmed they

had a mean student growth percentile of 65% or higher. The student growth model scores were

based on the results of standardized testing as measured by the student growth model and

reported by the GADOE SLDS within the past three years (Georgia Department of Education,

2013).

Definitions

1. *Adequate Yearly Progress* – A measurement defined by the No Child Left Behind Act
   that allows the United States Department of Education to determine how every public
   school and school district is performing academically according to the results
   (Rickman, 2014).

2. *American Recovery and Re-Investment Act* – A 2009 federal act that provided an
   unprecedented infusion of funds into the economy to stimulate economic growth due
   to the recession. The Race to the Top educational grant funding resulted from the
   grant (Rickman, 2014).

3. *A Nation At Risk* – A 1983 report by the National Commission on Excellence in Education linked educational outcomes with the economic, civic, and future outcomes of the United States (US Department of Education, 1983).

4. *Case Study* – A qualitative research method that studies current and real life cases (Creswell, 2013).

5. *Categories* – A unit of information such as events, instances and happenings (Creswell, 2013).

6. *Coding* – The process of aggregating the text into small categories of information (Creswell, 2013).

7. *College and Career Readiness Performance Index* – Georgia's school and district accountability system that replaced Adequate Yearly Progress when the state received a waiver from the U.S. Department of Education (Rickman, 2014).

8. *Common Core State Standards* – A set of high-quality academic standards in mathematics and English/language arts. These standards outline what students should know and be able to do at the end of each grade (Rickman, 2014).

9. *Constructivism* – An epistemological doctrine that asserts that reality is socially constructed by various agencies and processes (Gall, Gall, & Borg, 2006).

10. *Council of Chief State School Officers* – A state led effort to develop the Common Core State Standards was launched in 2009 by state leaders including governors and state commissioners of education from 48 states. State officers recognized the importance of consistent, real-world learning goals and launched an effort to ensure that all students, regardless of where they live, would be college and career ready upon graduating from high school (Conley, 2014).

11. *Elementary and Secondary Education Act* – 1965 federal government act that authorized an unprecedented amount of dollars for education with federal funds (Barnes, 2011).

12. *Level IV Student Growth Model Score*-a mean student growth model score of 65%-99% calculated annually for teachers based on state assessment data. A Level IV mean student growth model score is considered exemplary (Woods, 2018).

13. *Member Checks* – Presenting draft materials to participants for confirmation and further illumination (Stake, 1995).

14. *No Child Left Behind* – A federal law passed under President Bush. The law reauthorized federal programs that were meant to hold public schools and school districts accountable to higher standards (Rickman, 2014).

15. *Ontological Approach* – A philosophical assumption that questions the nature of reality. Reality was seen through several views. The researcher reported different perspectives as themes developed in the findings (Creswell, 2013).

16. *Open Coding* – Coding the data in major categories of information (Creswell, 2013).

17. *Patterns* – In case study research, an inference was made regarding a phenomenon with a single cases or cases and are systematically related to each other (Gall et al., 2006).

18. *Race to the Top* – A competitive $4.35 billion dollar federal grant program, signed by President Obama in 2009, that was designed to encourage and reward states that are creating conditions for educational reform; achieving significant academic outcomes (Barnes, 2011).

19. *Research Questions* – The guiding ideas underlying the investigation (Stake, 1995).

20. *State Longitudinal Data System* – A data system that provides longitudinal data and analysis that allows teachers to personalize learning by differentiating instruction (Rickman, 2014).

21. *Student Growth Percentile* – Student growth percentiles describe growth and capture the progress the student makes through the course of an instructional period. Student growth percentiles are reported 1-99. Lower percentiles indicate lower academic growth while higher percentiles indicate higher levels of student growth (Georgia Department of Education, 2013).

22. *Teacher Effectiveness Measure* – The final score generated by the Teacher Effectiveness System. It consists of two parts, the student growth model score as reported in the State Longitudinal System and observation score (Rickman, 2014).

23. *Teacher Keys Effectiveness System* – The Georgia teacher evaluation system used to distinguish good teachers, great teachers and ineffective teachers. The primary purpose of the evaluation system is to improve instruction through professional development based on the needs of the teacher (Rickman, 2014).

24. *Themes* – In case study research, an inference that a feature of the case is salient and characteristic of the case (Gall et al., 2006).

25. *Triangulation* – Working to substantiate an interpretation or to clarify different meanings (Stake, 1995).

Significance of the Study

The contributions of this study will add to the existing limited body of knowledge regarding teacher effectiveness, multi-pronged teacher evaluation systems, and the influence on student achievement. Bell, Goe, and Little (2008) completed a research synthesis on teacher

effectiveness and the multiple modes used to evaluate teachers. The purpose of their research synthesis was to help state and regional decision makers to better understand what constituted effective teaching and the advantages and disadvantages of the various measures used to evaluate effective teaching. The conclusions from the study indicated that multiple measures for teacher effectiveness, each designed to measure different aspects of teacher effectiveness must be employed. The study completed an extensive review of the literature regarding the different methods of measure teacher effectiveness. Observation protocols, instructional artifacts, student ratings and value-added models were studied in this study. The Measures of Effective Teaching (MET) project, investigated how multiple measures could identify effective teaching fairly and reliably (MET Project, 2012). The MET's three-year study examined classroom observation instruments, student perception surveys and student achievement gains. Significant lessons learned from the MET study included student perception data and classroom observations provided teachers meaningful feedback. Student perception data was considered a reliable indicator of the learning environment. A balanced approach was deemed most sensible when weights were assigned to form a composite teacher measure. (MET Project, 2012). Advocates of the newly designed teacher evaluations system argued the differentiated approach to teacher evaluation would improve teacher quality. To date, the research is limited on the influence of the newly designed teacher evaluations on teacher retention (Robertson-Kraft & Zhang, 2018).

The Intensive Partnerships for Effective Teaching initiative was funded and designed by the Bill and Melissa Gates foundation (Stecher et al., 2018). It was a multi-year study aimed at increasing student access to effective teachers and to increase student outcomes. From 2009 through 2016, seven school districts and school sites participated in the Intensive Partnerships for Effective Teaching Initiative. The initiative totaled $575 million: $212 million in grants from the

Gates Foundation and the remainder primarily from each site's general fund, federal grants, and other local sources. All seven sites designed a multiple-pronged teacher evaluation system which included a rubric based teacher observation and a measure of student achievement growth. Almost all teachers at all seven sites were rated over time to be highly effective and fewer teachers were rated as ineffective. Despite the sites' efforts and considerable resources, by 2014 the initiative failed to achieve its goals for improved student achievement through the development of a robust measure of teacher effectiveness. Access to effective teaching was not dramatically better than sites that did not participate in the Intensive Partnerships Initiative. The initiative failed to meet dramatic improvements in outcomes due to the following possibilities: incomplete implementation of key practices and policies, the influence of state level policy changes during the implementation of the initiative, insufficient time for effects to appear and a flawed theory of action.

The New Teacher Project, since its inception in 1997, released a series of highly acclaimed studies on their policies and practices that pertain to the teaching workforce (Weisberg et al., 2009). In 2009, The New Teacher Project published *The Widget Effect: Our National Failure to Acknowledge and Act on Differences in Teacher Effectiveness.* The Widget Effect reported that a teacher's effectiveness was the most important factor for schools to improve student achievement. Lessons learned from the Widget Effect included the adoption of a comprehensive evaluation system, and the importance in training administrators in the teacher performance evaluation system. Information discovered from this case study was built upon similar studies of teacher effectiveness, teacher evaluation systems, and the influence on student achievement. The information gathered from the 15 participants regarding teacher effectiveness can be easily adapted on a wider scale to address student achievement at other schools within the

local school district and throughout the state. Most researchers, policy makers, and district leaders agreed that the current evaluation system does little to help teachers improve their effectiveness or support personnel decision making (MET Project, 2010). The results from this present study will help district leaders increase teacher effectiveness through professional development and improve human resource decision-making.

Research Questions

The purpose of this qualitative case study is to explore teacher effectiveness and the impact on student achievement. Creswell (2013) described the case study as the common experience of the participants and to reduce the individual experiences into a universal essence.

Research Question 1: How do effective teachers implement professional knowledge and instructional planning to influence student achievement?

Research concluded that the following three questions must be considered during effective planning: What should be taught, how should it be taught and how should instruction and student learning be addressed (Borko & Livingston, 1989). Effective teachers plan for the context of the lesson or unit to help students organize, relate, and make knowledge become a part of the student's long term memory (Marzano, Pickering, & Pollock, 2001).

Research Question 2: How do effective teachers implement differentiation and instructional strategies to influence student achievement?

Effective teachers differentiate instruction based on the student's needs, interests, and preferences. Differentiation of the learning maximizes the individual student and is considered the corner stone of effective teaching (Weiss, Pasley, Smith, Banilower, & Heck, 2003). Studies on student achievement and differentiation in instruction have concluded that students are actively engaged when the instruction is appropriately suited to the student's levels and needs

which increases student achievement (Covino & Iwanicki, 1996). A meta-analysis of 36 studies found instructional interventions designed to accommodate the learning styles of the learner showed a statistically significant difference in achievement over students not accommodated for their learning style. The mean achievement of high-risk students increased nearly one standard deviation approximately 84th percentile versus 50th percentile when teachers accommodated student learning styles (Dunn, Griggs, Olson, Beasley, & Gorman, 1995).

Research Question 3: How do effective teachers implement and use assessment strategies to influence student achievement?

Assessment of learning includes a variety of methods to determine the extent to which the student has mastered the intended learning (Gronlund, 2006). Examples of assessment of student learning include teacher observation, oral questioning, exit cards, portfolio entries, projects, homework, criterion referenced tests and norm based tests (Tomlinson, 1999). On the other hand, assessment for learning involved the analysis of data points to measure student progress, to guide instructional decision making and to provide timely feedback (Gronlund, 2006). Effective teachers aligned intended learning outcomes, instruction and assessment to keep track of student progress (Walker, 1998).

Research Question 4: How do effective teachers create a positive and academically challenging environment to influence student achievement?

Cornell and Mayer (2010) ascertained that academic success began with a mutually respectful relationship between the student and the teacher. A safe and supportive classroom climate was profoundly linked to positive learning outcomes. Most effective teachers indicated that routines and procedures take precedence over academics during the first week of school (Emmer, Evertson, & Worsham, 2003). Academically challenging classrooms had an effective

teacher that implemented effective classroom management to establish order (Emmer & Stough, 2001). In addition,, the teacher set high but reasonable expectations for all students (Corbett, Wilson, & Williams, 2002).

Research Question 5: How do effective teachers communicate to influence student achievement?

Effective communication and collaboration was at the very core of effective teaching (Rowan, Fang-Shen, & Miller, 1997). A growing body of research suggested effective teachers created connections among school, family and community which increased student behavior and student achievement (Epstein & Sheldon, 2002).

Summary

In recent years, calls for public school reform has spurred substantial change to the education landscape. In 2011, Georgia was awarded an astounding $400,000,000 Race to the Top federal grant to increase teacher effectiveness with measures linked to student achievement (US Department of Education, 2013). The identification of effective and ineffective teachers was at the heart of the Race to the Top Grant.

Research on teacher effectiveness and newly designed teacher evaluation systems was greatly influenced by the research led by the Gates Foundation and the Measures of Effective Teacher Project. Significant lessons learned from the Measures of Effective Teacher Project revealed student surveys and classroom observations provided meaningful feedback to teachers (MET Project, 2010).

The Widget Effect, a 2009 report from the New Teacher Project also influenced the need for greater teacher accountability. The Widget Effect determined that in most school districts less than 1% of all teachers were rated as unsatisfactory (Kraft & Gilmour, 2017).

A newly designed multi-pronged teacher evaluation teacher evaluation as decreed by the Georgia Race to the Top Grant became operational in all Georgia public schools for the 2014-2015 school year (Woods, 2018). The need for an in-depth case study to better understand teacher effectiveness proved to be the problem statement for the present study. The purpose of the study was to explore the perceptions, feelings, and thoughts of 15 middle teachers regarding the influence of teacher effectiveness on student achievement.

CHAPTER TWO: LITERATURE REVIEW

Overview

The increased role of the federal government in education began with the adoption of the Elementary and Secondary Education Act (ESEA) in 1965 (Viteritti, 2012). Prior to 1965, funding for education was primarily the responsibility of the state and local education authorities. The initial $ 1 billion ESEA funding in 1965 doubled in size one year later in 1966. By 1969, ESEA funding ballooned to $3 billion. A longitudinal study conducted in 1984 to determine the effectiveness of the ESEA showed achievement gains for poor and minority children were not sustainable over time.

A thorough literature review began with the theoretical framework of constructivism. Next, I provided the historical roots of educational reform and the increased role of the federal government in education beginning with the Elementary and Secondary Act (ESEA) (Sawchuk, 2016). A summary of *A Nation at Risk* followed by the No Child Left Behind Act, traced the calls for greater accountability in student achievement (Viteritti, 2012). Next, the Common Core State Standards initiative, the American Recovery and Reinvestment Act, and the Reauthorization of the Elementary and Secondary Act provided the road map for educational reform (Conley, 2014; Manna & Ryan, 2011; US Department of Education, 2010). The Race to the Top federal grant and the Georgia vision for the Race to the Top grant provided in detail the changes needed to bring about significant growth in student achievement (Georgia Department of Education, 2013). Finally, the Every Student Succeeds Act, passed in December 2015, enhanced the states' power to develop, test and measure academic metrics and standards. ESSA allowed states to replace the common core standards with their own standards. On balance, ESSA reversed the federal boundaries in educational policy set by NCLB. ESSA and reflected a

more state centric law to enhance state autonomy and diluted federal over reach (Sawchuk, 2016).

Theoretical Framework

The purpose of this qualitative case study was to construct knowledge of teacher effectiveness and the influence on student achievement. The basic purpose of case study research is to reduce the participant's experiences into a universal essence (Creswell, 2013). This study was based on the theoretical framework theory of Constructivism (Reich, 2007). Constructivism is an epistemology, a meaning making learning theory that offered an explanation as to how a human learns (Ültanir, 2012). Individuals created their new knowledge based on their interaction of what they already know or believe. The teacher served as a guide or facilitator to encourage students to question, challenge and create their own ideas, opinions and conclusions. Gall et al. (2006) defined constructivism as the epistemological doctrine that is created socially and constructed differently from one individual to another.

Cognitive Development

Constructivists maintained the belief that students arrived in any learning situation with a prior knowledge and experience that influenced how they interacted with new information. The constructivist view shifted knowing as a process. The common core belief of the constructivist theory was that we construct knowledge (Ültanir, 2012). An important criteria of the student-centered constructivism learning theory was that learning needed to be active and learning needed to take place in an environment whereby the interactions are between learners, between learners and teachers and between learners and subject matter (Reich, 2007). The conventional method of lecture teaching was considered essentially a one-way transmission of knowledge. Classes that used this conventional method were usually driven by teacher talk and depended

heavily on textbooks. Teachers served as pipelines of information and transferred the knowledge to passive students. The conventional method of teaching stifled active learning and creativity (Bimbola & Daniel, 2010).

A model of constructivism focused on creating learning environments that allowed students to pursue goals based on their own experiences, interests and concerns (Hyslop-Margison & Strobel, 2008). Constructivism defined the teacher's role as a facilitator to help guide students to design their own learning experiences in response to their own priorities, concerns and needs. Peters (2010) suggested that student-centered classrooms were more fluid and unpredictable as compared to teacher-centered classrooms. Therefore, teachers who are interested in creating student-centered classrooms needed support in designing classrooms where the teacher is no longer the sole authority and provider of knowledge. A significant role of the teacher was to provide purposeful questions to engage the student's interest (Bimbola & Daniel, 2010). The cognitive theorists believed teachers should provide learners with incentives and opportunities to learn. Furthermore, the role of the teacher was to engage students in the active role of constructing meaning. The teacher's primary goal was to generate a way of viewing and organizing the world. Learning by doing with other students was considered an important source of support, modeling, motivation and coaching. Drawn from the sociocultural constructive framework, the following attributes were prominent in an academically robust constructivist classroom:

- Active Engagement: students were directly involved in the actions that support learning.

- Relevance: students saw the relationship between the knowledge to be gained and their personal life.

- Collaboration and community: noncompetitive social interaction with other students was allowed for students to co-construct knowledge.

- Learner autonomy: the student had a degree of control over self-selection of the content or methods of learning.

- Cognitive complexity: learning tasks were representative of real-life experiences with a myriad of web like interrelated forces.

- Generativity: discipline inquiry was involved in the use of existing knowledge to discover new ideas, concepts and knowledge.

- Multiple perspectives: experiences allowed students to see the same information in different ways, from different points of view, or used it to increase their own learning.

- Pluralism: students developed a flexible view of reality rather than fixed on a single view of reality.

- Reflection and metacognition awareness: students thought about their own learning process and were actively involved in identifying strategies to increase their learning and self-monitoring.

- Transformation: students were expected to synthesize or transform information into new forms for new purposes.

- Productivity: students were expected to do something with their knowledge that would be beneficial to themselves or to others (Schoen, 2008).

The research questions that guided this case study provided the scaffolding and framework for acquiring the essence of effective teaching and the influence on student achievement (Stake, 1995). The application of the contributions to the Constructivist view regarding the acquisition of knowledge, provided a thick description of the case study research

and allowed for justification of a narration to describe the universal essence discovered in the research and detailed in the final report.

Related Literature

To better understand recent educational reform that has called for increased measures in accountability in teacher effectiveness, a review of the literature revealed the confluence of influences on educational reform and how it directly influenced student achievement (Viteritti, 2012). The source of federal legislation and funding for public schools can be traced to 1965, when President Lyndon Johnson signed into law the historic Elementary and Secondary Education Act (ESEA). This act significantly increased federal funding in the area of education. The 1960's civil rights movement and the war on poverty spurred the political context for the passage of ESEA. The primary purpose of the ESEA was to better serve the educational needs of economically disadvantaged children (Crawford, 2011). ESEA authorized $2 billion in federal funds for elementary and secondary education during the 1965-1966 school year. Unfortunately, the increase in spending in Title 1 communities did not correlate to an increase in test scores as measured by the National Assessment of Educational Progress (NAEP) (Barnes, 2011). A study conducted by Martin and McClure on behalf of the NAACP Legal Defense Fund determined that Title I monies were misused by school districts without spending it on low-income students who were supposed to be the beneficiaries. In 1984, a longitudinal report of the ESEA program indicated that there was some evidence that students in Title I programs increased at a faster pace than their peers, however; these gains were not sustainable over time (Viteritti, 2012). Since 1965, the ESEA has been reauthorized six times (Crawford, 2011). Calls for greater accountability lead to the 1994 reauthorization of ESEA known as the Improving America's Schools Act (IASA). The IASA called for accountability of student outcomes. Since 1965, the

federal government has spent approximately $400 billion on public education while the student achievement in reading and math has remained stagnant over the past forty years. Provisions for assessments of students did not lead to real accountability measures. The law allowed states, school districts and schools to be held accountable for producing measurable student gains in reading and mathematics (Yell, Katsiyannas, & Shiner, 2006).

A Nation at Risk

In 1983, *A Nation at Risk: The Imperative for Education Reform* was released by the Commission on Excellence in Education. President Ronald Reagan's Secretary of Education, Terrell Bell, commissioned the report (Bloom, 2010). *A Nation at Risk* captured the attention of the American public as it reported on the state of U.S. public education as mediocre at best. The report linked education with the civic, social and economic future of the United States. Concerns were noted with an increasingly global economy and decrease in domestic manufacturing jobs that had in the past sustained a working-class economy. The report also projected that occupations that require post-secondary education would significantly increase. A critical driver of the report called for education reform to close achievement gaps. International comparisons of U.S. student achievement came short along with a steady decline in SAT scores (US Department of Education, 1983). As a result of the report, within a year, thirty-five states had set new graduation requirements, twenty-two states had created curriculum reform and twenty-nine states had set new assessment policies. Historians regard the clarion call from *A Nation at Risk* as the beginning of the standards movement and modern school reform movement (Viteritti, 2012).

No Child Left Behind

On January 8, 2002, George W. Bush signed into law the No Child Left Behind Act (NCLB) (Doan, 2008). NCLB amended and reauthorized the federal educational programs under ESEA. The main goal of NCLB was to expand accountability measures, which lead to an unprecedented increase in federal regulation over public education. NCLB upended the traditional educational reform boundaries of the federal government and expanded the federal foot print on educational policy (Heise, 2017). NCLB focused primarily on student outcomes and the anticipated reduction in achievement gaps of student groups such as students with disabilities rather than focusing on the equal educational opportunities for students. NCLB mandated accountability measures to ensure that students were learning and that the achievement gap was closing (Doan, 2008).

For the first time, mandatory testing of all students included students with disabilities, in reading, math and science and were required in grades three through eight and one time in high school (Manna & Ryan, 2011). NCLB also required states to annually measure school progress by using adequate yearly progress (AYP) as the metric measure. Under NCLB, if a school received Title I funding and failed to make adequate yearly progress, it was subject to federally defined improvement measures.

The major flaw of No Child Left Behind was the federal government's inability to monitor state governments' development of standards, implementation of annual assessments to determine student achievement and to identify cut scores that defined student proficiency (Manna & Ryan, 2011). As a result, NCLB did not generate the meaningful school improvement needed to significantly close the achievement gap (McGuinn, 2012). Under NCLB, states were obligated to reach an unrealistic goal to make 100% yearly adequate progress in math and

language arts by 2014. Without statutory relief, 80% of all public schools by 2012 were predicted to fail (Heise, 2017).

In January 2006, the Council of Chief State School Officers (CCSSO) launched an ESEA task force to identify key principles that were addressed when Congress reauthorized ESEA (CCSSO, 2007). The CCSSO released a policy statement regarding the reauthorization of ESEA and the type of federal-state education partnership needed for our nation to maintain its moral, democratic, and economic leadership in the 21st century. The following core themes were recommended in the CCSSO statement regarding the reauthorization of the most current ESEA, the No Child Left Behind Act: (a) Increased state accountability systems, (b) reinforced state assessment decisions, (c) created awards and differentiated consequences, (d) addressed special populations, (e) supported teacher quality, (f) increased resources, (g) high school reform, (h) increased international benchmarking, (i) reinforced the role of the states, and (j) P16 alignment and increased peer review.

The Common Core State Standards Initiative

The driving force behind The Common Core State Standards Initiative was the National Governor's Association (NGA) and CCSSO (Conley, 2014). In 2007, as a result of the United States lagging economy and the need for global competitiveness the members of the CCSSO and NGA released a report *Benchmarking for Success: Ensuring U.S. Students Receive a World Class Education.* The report called for states to upgrade educational standards to a common core of international standards in the areas of math and language arts for grades K-12 to ensure that the students in the United States would be globally competitive. Furthermore, the goal of the Common Core Standards Initiative was to allow educators to share a common language. In

addition, the Common Core Standards Initiative allowed for consistency of high expectations for college and career readiness.

As a result of the CCSSO and NGA *Benchmarking for Success* report, The Common Core Standards were developed by teachers, content experts, state representatives, and education organizations described what it would take to be ready for college and career training programs (Conley, 2014). All state education agencies, educators and the public at large vetted drafts of the Common Core Standards. Feedback from these groups lead to significant revisions to the Common Core Standards. The final draft of the Common Core State Standards was subjected to a validation committee. The B. Fordham Foundation analyzed the final draft of the Common Core Standards and determined that they were more rigorous and clearer than the vast majority of state standards (Carmichael, Martino, Porter-Magee, & Wilson, 2010). As a result of the Common Core State Standards movement, a major shift occurred in teaching and learning. Mathematics focused on fewer topics, which narrowed and deepened the energy spent in the classroom on math. English and language arts focused on the growing complexity of text and the citing of evidence. In addition, an increase in building knowledge resulted from using content rich nonfiction (Conley, 2014). In 2011, Education Secretary, Arne Duncan imposed conditions for states requesting the federal waiver relief from NCLB. For states to gain the federal waiver, states were required to adopt the common core standards. To avoid the stigma of having schools labeled by NCLB as failing, states had a lot at stake politically and financially (Heise, 2017). Therefore, acceptance of the common core state standards initiative was agreed upon by 48 states (McGuinn, 2012).

American Recovery and Reinvestment Act

In response to a crippling economic recession, on February, 17, 2009, President Barack Obama signed into law the landmark American Recovery and Reinvestment Act of 2009 (AARA), also known as the 2009 economic stimulus package (Manna & Ryan, 2011). The purpose of ARRA was to invest in critical sectors including education. The ARRA educational reform was built on the following principles:

- The improvement of teacher and leader effectiveness.

- Information was provided to families to help evaluate their schools.

- College and career ready standards were implemented.

- Improvement of student achievement in the lowest performing schools (US Department of Education, 2010).

The Reauthorization of the Elementary and Secondary Act

Meanwhile, in March 2010, education priorities of the reauthorization of the Elementary and Secondary Education Act were released (US Department of Education, 2010). The blueprint for the reauthorization was built on the significant reforms already made in response to the American Recovery and Reinvestment Act of 2009. The blueprint included the following five areas of reform:

- College and career ready students.

- Great teachers and leaders in every school.

- Equity and opportunity for all students.

- Raising the bar and reward excellence.

- Promoting innovation and continuous improvement.

College and Career Readiness

The blueprint followed the nation's governor's calls for development of language arts and math standards that built on college and career readiness (US Department of Education, 2010). A call was made to develop next generation assessments to be aligned with college and career readiness standards. The next generation assessments were required to evaluate students' higher-order thinking skills and provided educators, students, parents and the stakeholder community a better picture of student growth.

Great Teachers and Great Leaders

The blueprint for the reauthorization of ESEA recommended that effective teachers and leaders should be recognized, encouraged and rewarded (US Department of Education, 2010). States were encouraged to develop evaluation protocols to identify highly effective teachers and leaders. Results of the newly developed evaluation systems were used to identify professional development needs to increase student achievement. The proposal provided funds for states to track equitable access to effective principals and teachers and take steps to increase accessibility to effective educators in high poverty and high minority schools.

Equity and Opportunity for All Students

The ESEA proposal called for an accountability system to implement college and career ready standards. States with the greatest gains in closing the achievement gap were rewarded (US Department of Education, 2010). The proposal held states accountable for schools that did not make progress over time. The plan required school systems to meet the needs of all learners to include English language learners, disabled students, homeless students, migrant students, rural students, and neglected students. School systems were encouraged to take steps to increase equity in the resources available to high and low poverty schools.

Raise the Bar and Reward Excellence

The ESEA proposal provided incentives for states and local school districts to work together in a Race to the Top to develop plans that change educational policies to increase outcomes for students (US Department of Education, 2010). The blueprint also supported school choice options to include charter schools for students within and across school districts. The plan was based on the belief that access to a college and career ready high school culture would help students succeed.

Promote Innovation and Continuous Improvement

The ESEA blueprint fostered innovation and the acceleration of success by investing in programs that had demonstrated success in next generation innovations and solutions (US Department of Education, 2010). Newly competitive funding streams would provide states with greater flexibility and districts would have fewer restrictions on funding with less red tape. Programs were prioritized for school districts that promote the school as the center of the community and supported strategies to increase family and community engagement.

The U.S. Department of Education's blueprint to reauthorize the No Child Left Behind Act suggested that the $14.5 billion Title I program could be tied to the adoption of the new Common Core State Standards (Barnes, 2011). The blueprint stated that beginning in 2015, funds would be made available only to states that implemented assessments based on college and career readiness standards. The ESEA blueprint implied that states would lose their Title I funding if they choose not to participate in the adoption of the Common Core Standards in RTTT.

The Race to the Top

The ARRA of 2009 provided $4.35 billion dollars for the RTTT federal grant program (Barnes, 2011). RTTT shifted the focus of federal funding from supporting laggards to supporting leaders in educational performance and reform. The competitive grant process relied on incentives instead of sanctions to drive state reform (McGuinn, 2012). According to the U.S. Department of Education, the Race to the Top grant encouraged and rewarded states that had already created conditions for educationally innovative reform in the following areas: (a) Significant student achievement gains, (b) closing achievement gaps, (c) increased high school graduation rates, (d) preparation for college (e) career readiness, and (f) implementation of ambitious education plans that address the following core areas at the heart of the RTTP program:

- Adoption of internationally benchmarked standards and assessments to prepare students for success in college and the workplace.

- Build a State Longitudinal Data System (SLDS) to measure student growth and inform teachers and leaders how to improve their practices.

- Recruit, reward and retain effective teachers and leaders.

- Turn around lowest performing schools (Learning Point Associates, 2010).

The RTTT application process was awarded in three phases (US Government Accountability Office, 2013). Phase 1 applications were due to the U.S. Department of Education on January 19, 2010. Forty-one states, which included the District of Columbia, applied for the Phase 1 RTTT grant. The CCSSO and Learning Point Associates conducted the initial review of the 41 applications for the phase 1 RTTT grant. In March of 2010, the U.S. Department of Education selected 16 states as finalists for phase 1 of the RTTT (Learning Point

Associates, 2010). On June 11, 2010, Delaware was awarded 119 million dollars and on July 26, 2010, Tennessee was awarded 501 million dollars for the phase 1 RTTT program. On September 24, 2010, 8 states were awarded amounts that ranged from $75 million to $700 million. States were required to spend 50% of the award on districts that choose to participate in the RTTT program. The RTTT grants were active for a period of four years. All phase 1 and phase 2 funds not obligated and liquidated by September 30, 2015 would revert back to the U.S. Treasury.

The RTTT educational reform program attracted money from private sector actors with the intent to influence educational reform. The federal teacher effectiveness agenda functioned symbiotically with the philanthropic community's giving targets (Koppich & Esch, 2012). The federal policy and foundation efforts became so intertwined that it is was difficult to know where one ended and where one began. Between 2000 and 2008 philanthropic foundations such as the Bill and Melissa Gates foundation along with philanthropists such as Mark Zuckerberg, the founder of Facebook, contributed $684 million dollars to shape education reform policy. In addition, RTTT reform efforts were supported by think tanks such as the Center for American Progress. Charter school networks such as Knowledge is Power Program, Green Dot, Aspire, and SEED joined the RTTT bandwagon. The RTTT represented a coming out party of sorts for education consultants such as Kaplan, New Teachers for New Schools, Teach for America, and Wireless Generation (McGuinn, 2012). The current federal and foundation community teamwork continued to strengthen and should continue to be monitored closely (Koppich & Esch, 2012).

Great Teachers and Great Leaders

The RTTT federal initiative provided a unique opportunity for states to engage in significant reform to increase teacher and leader effectiveness. (Marzano, Schooling, & Toth, n.d.). The RTTT application process required states to develop a human capital strategy to

include the following: recruiting, hiring, and induction process. Teachers and leaders were evaluated using multiple measures with student growth as a significant measure. The great teachers and leaders section of the RTTT application accounted for 28 percent of the overall total available points, which accounted for more than any other section of the RTTT application. The points available on the great teachers and leaders section of the application included the following five subsections: provided pathways for great teachers and leaders, the improvement of teacher and leader effectiveness based on performance, ensured equitable distribution of effective teachers and leaders, improvement of teacher and leader preparation programs and proved effective support to teachers and leaders. Additional subsections included evaluation systems, annual evaluations, and evaluation systems to inform decision-making.

Learning Point Associates (2010) conducted the initial research and data collection of all 41 phase 1 applications for RTTT February through March 2010. The U.S. Department of Education used a peer review process to award the grants. Over 1,500 prospective reviewers applied or were nominated to review Phase 1 state applications. The U.S. Department of Education hired 58 individuals to serve as peer reviewers for the Phase 1 application process (US Government Accountability Office, 2013). Applications for the RTTT grant were scored against a rubric that incorporated 19 factors and organized into six categories. With reform priorities weighted differently, the investment in great teachers and great leaders was clearly a priority of the grant (US Department of Education, 2009). In April of 2010, staff members of National Comprehensive Center for Teacher Quality analyzed the RTTT applications in the area of teacher effectiveness (Learning Point Associates, 2010).

Teacher and Leader Evaluation

A rubric was used to evaluate teacher and leader effectiveness based on performance and established in the RTTT guidelines for teacher and leader evaluation (US Government Accountability Office, 2013). The peer reviewers scored state's applications to be sure participating districts would implement the following for teacher and leader evaluations:

- Measured student growth for each individual.

- Designed and implemented evaluation systems that include multiple data points for teachers and leaders that take student growth as a significant factor.

- Evaluate teachers and leaders annually to include student growth.

- Used these data points to inform decision making regarding professional development, compensation, promotion, retention, tenure, and certification.

Research consistently indicated that teachers can influence student achievement gains (Muñoz & Chang, 2007). During the review of the Phase 1 applications, Learning Point Associates and noted the following trends in measuring teacher effectiveness: (a) Student growth measures, (b) other quantitative measures related to student performance, (c) teacher observations, (d) analysis of teacher artifacts and portfolios and, (e) other measures. The RTTT application required states to develop a teacher evaluation system that would use student achievement data as a significant factor in determining teacher effectiveness. A major component common throughout all of the applications was observations of teacher performance. As a result of the RTTT program, states committed to unprecedented educational reform particularly in the area of teacher effectiveness. Nearly all of the states that applied for the RTTP funding mentioned the implementation of a new teacher evaluation system and pay for performance plans (Koppich & Esch, 2012). In order to receive funding, applications were

required to include student growth and pay for performance models as multiple measures in a newly created teacher evaluation system (Hershberg & Robertson-Kraft, 2010). For most state grantees, nearly one third of the state level RTTT spending (US $589 million) was intended to improve teacher and leader effectiveness (Kolbe & Rice, 2012).

Learning Point Associates (2010) identified the following four RTTT applications with the highest scores under the great teachers and leaders' section: Georgia, Louisiana, Rhode Island, and Tennessee. The common thread in all four RTTT applications included the emphasis on stakeholders to design and implement educator evaluation instruments. The Georgia RTTT application assigned clearly defined roles across the educator spectrum to include the following: state leaders, district leaders, school leaders, and teachers. In addition, the Georgia RTTT application included a plan to create a Teacher Effectiveness Measure (TEM), a Leadership Effectiveness Measure (LEM), and a District Effectiveness Measure (DEM). The Georgia RTTT application assigned the following three components to the teacher effectiveness measure: a rubric based multiple rating observation tool, student perception survey, and student growth model.

Georgia's Vision

The Georgia RTTT educational reform program and vision clearly focused on effective teachers and leaders to bring about revolutionary change in the area of the student achievement world (Georgia Department of Education, 2013). To equip all Georgia students, through effective teachers and leaders and through creating the right conditions in Georgia's schools, and classrooms, with the knowledge and skills to empower them to graduate from high school, be successful in college and professional careers, and be competitive with their peers throughout the United States and the world.

The Georgia RTTT application was prepared through a partnership among GDOE, the Governor's Office of Student Achievement, and education stakeholders (US Department of Education, 2013). Four working groups along with a feedback team developed the winning RTTT application. Teachers, administrators, superintendents, higher education faculty, state policy makers, non-profit education organizations, members of the business community, and philanthropic communities collaborated on the development of the application. In 2010, Georgia was awarded $400 million to implement its plan. The five main goals of the Georgia Education Reform Agenda as outlined in the RTTT application included the following:

- Set high standards and rigorous assessments for all students leading to college and career readiness.

- Prepare students for college, transition, and success.

- Provide for great teachers and leaders.

- Provide effective support for all schools, including the lowest performing.

- Lead the way in science, technology, engineering, and mathematics (STEM) fields.

Georgia Teacher Keys Effectiveness System (TKES)

Great teachers and great leaders was at the heart and cornerstone of the Georgia education reform efforts. As a result, in 2012, as part of the RTTT initiative, Georgia designed and implemented the Teacher Keys Effectiveness System (TKES), a common statewide assessment designed as a teacher evaluation tool to provide professional growth and development for each teacher.

The TKES was first piloted in 26 school districts throughout the state in 2012 (Hanover Research, 2013). The assessment was comprised of three components to determine the overall Teacher Effectiveness Measure (TEM). The components of the overall evaluation included the

following: Teacher Assessment on Performance Standards (TAPS) observational measure, surveys of instructional practice (student perception surveys), and student growth model (student growth percentiles).

The main goals of the TKES included the following:

- Increased academic growth.

- Improvement of the quality of instruction with teacher accountability.

- Support of the goals and vision of Georgia public schools.

- Implementation of a performance evaluation system that increased teacher and evaluator collaboration and promoted overall improvement teacher effectiveness (Georgia Department of Education, 2013).

During the 2013, Georgia legislative session, House Bill 244 (HB 244) was passed requiring all public schools to use the evaluation system developed by the Georgia Department of Education (Georgia Department of Education, 2014). HB 244 outlined the TKES and how it would be used to inform personel decisions. Furthermore, HB 244 decreed any individual with two or more needs development evaluations over a five year period would be unable to renew their professional licensure.

In 2016, the Georgia Senate Bill 364 was passed and signed into law by Govenor Nathan Deal (Woods, 2018). This law made several key changes to the educational landscape. For example, the law reduced the number of state mandated tests students must take and reduced the percentage that student scores would count for the TKES evaluation. The weight of student test scores on TKES was reduced from 50% to 30% with the remaining 20% coming from professional growth plans which allowed the evaulation system to be used more as a coaching

tool. Furthermore, student surveys were now optional in the teacher evaluation process rather than a requirement.

Teacher Assessment on Performance Standards (TAPS)

A review of the literature revealed several studies of teacher behaviors have been used to determine teacher effectiveness and to predict student achievement (Georgia Department of Education, 2013). The research on the dimensions of teacher effectiveness has been extensive in the following areas: (a) Instruction, (b) student assessment, (c) learning environment, and (d) personal qualities.

The research based on teacher effectiveness as it relates to instruction has been extensively conducted by the following studies: (Allington, 2002; Berliner, 1986; Darling-Hammond et al., 2012; Eisner, 2003; Good & Brophy, 2004; Johnson, 1997; Langer, 2001; Molnar et al., 1999; Perie, Baker, & Sharon Bobbitt, 1997; Pressley, Raphael, Gallagher, & DiBella, 2004; Ryder, Burton, & Silberg, 2006; Spear-Swerling & Zibulsky, 2014; Sternberg, 2003; Stronge, Ward, Tucker, & Hindman, 2007; Stronge & Xu, 2015; Weiss et al., 2003; Wenglinsky, 2000, 2002; Zahorik, Halbach, Ehrle, & Molnar, 2003).

The research based on teacher effectiveness as it relates to planning for instruction, range of teaching strategies, questioning techniques and student engagement has been conducted by the following studies: (Bundick, Quanglia, Corso, & Haywood, 2014; Burgher, Finkel, Adesope, & Wie, 2015; Capraro, Bicer, Grant, & Lincoln, 2017; Carbonneau & Marley, 2015; Turner, Christensen, Kackar-Cam, Trucano, & Fulmer, 2014).

The CCSSO emphasized adaptability as an essential teacher quality (Parsons et al., 2018). Effective teachers are better able to adapt to new material emphasized on new tests especially when an assessment change is a result of a change in standards (Backes et al., 2018).

Furthermore, studies on teacher effectiveness acknowledged the importance of teacher reflection. Exemplary teachers plan (preactive stage) instruct (interactive stage) and reflect (post active stage) (Parsons et al., 2018).

The research on student assessment as it relates to monitoring of student progress, the use of assessment, differentiation and feedback has been conducted by the following studies: (Chappuis & Stiggins, 2002; Foegen, Jiban, & Deno, 2007; Fulmer & Polikoff, 2014; Guskey & McTighe, 2016; Hattie & Timperley, 2007; Li, 2016; Matsumura, Patthey-Chavez, Valdés, & Garnier, 2002; Tomlinson, 1999; Ysseldyke & Bolt, 2007; Zuiker & Whitaker, 2014).

Research on the learning environment dimension of teacher effectiveness regarding the learning environment has included: classroom management, organization, and behavioral expectations has been conducted by the following studies: (Corbett & Wilson, 2002; Good & Brophy, 2004; Greenberg, Putman, & Walsh, 2014; Johnson, 1997; Marzano, 2003; Palardy & Rumberger, 2008; Perle, 2016; Pressley et al., 2004; Sandilos, Rimm-Kaufman, & Cohen, 2017; Schumacher, Grigsby, & Vesey, 2015; Taylor, Pearson, Clark, & Walpole, 1999; Wang, Haertel, & Walberg, 1993; Zahorik et al., 2003).

Research on the personal qualities dimension of teacher effectiveness have previously included the following: caring, respect, fairness, interactions with students, enthusiasm, motivation, attitude toward teaching, and encouragement of responsibility has been conducted by the following studies: (Adams & Singh, 1998; Becker, Goetz, Morger, & Ranellucci, 2014; Corbett & Wilson, 2002; Cruickshank & Haefele, 2001; Darling-Hammond, 2001; Garza, Alejandro, Blythe, & Fite, 2014; Good & Brophy, 2004; Hamre & Pianta, 2005; Keller, Hoy, Goetz, & Frenzel, 2016; Quek, 2005; Rowan et al., 1997; Tomlinson, 2015).

Classroom observation rubrics such as the Classroom Analysis of State Standards (CLASS) Keys teacher appraisal system consolidated the research on teacher behaviors that are associated with increased student achievement (Goffin, Hamre, & Kraft-Sayre, 2010). The Georgia CLASS Keys served as a harbinger to the current teacher assessment on performance standards (TAPS) observation component of the TKES system. The CLASS was field tested in hundreds of schools in Georgia during the 2008-2009 school year. School leaders and teachers provided feedback that was incorporated into the final CLASS adoption process. Local education authorities throughout Georgia implemented the CLASS through the 2013-2014 school year. CLASS was created based on an extensive review of the literature on observational measures. CLASS evaluated the following three areas of classroom characteristics: emotional climate, management, and instructional support (La Paro, Pianta, & Stuhlman, 2004). The CLASS evaluation system was validated by over ten years of research in educational settings directly linking teacher-student interactions with growth in children's academic skills (Goffin et al., 2010). Advantages of the CLASS evaluation system included teacher-student interactions, validation in thousands of classrooms, professional development directly aligned to the teacher evaluation, and training available for schools.

The CLASS Keys teacher evaluation system was developed to support teacher's work in Georgia's classrooms using the Georgia Performance Standards to improve student achievement (Barge, 2011). The CLASS keys appraisal process was organized into the following five strands to evaluate teacher effectiveness: curriculum and planning, standards-based instruction, assessment of student learning, professionalism, and student achievement. The five strands were developed into 28 teacher performance standards with rubrics that described accompanying evidence and artifacts. The purpose of the CLASS keys was twofold: improvement and

accountability. School leaders and teachers provided feedback that was incorporated into the final appraisal process.

The TAPS portion of the Georgia TKES provided evaluators a rubric based evaluation method to measure the teacher performance on the following five teacher domains: planning, instructional delivery, assessment of learning and for learning, learning environment, and professionalism, and communication. (Georgia Department of Education, 2013).

The CLASS Keys standards continued to be referenced in the current TKES 2014 handbook (Georgia Department of Education, 2014). The following ten standards are assessed to determine the overall TAPS score:

Performance Standard 1: Professional Knowledge

Professional knowledge was described as the understanding of the curriculum, subject content and the needs of the students by providing relevant learning experiences (Georgia Department of Education, 2013). Many studies suggested that teachers with strong content knowledge implemented strategies such as asking higher-level questions, implemented inquiry-based learning activities, and provided for student-based learning opportunities (Weiss & Miller, 2006; Wenglinsky, 2000). Effective teachers provided students with learning targets in student friendly language, so that students would be responsible for learning outcomes (Chan, Graham-Day, Ressa, Peters, & Konrad, 2014).

According to the Georgia Department of Education TAPS rubric, sample performance indicators for professional knowledge include the following:

- Curriculum standards and key elements are addressed.

- Student's use of higher-order thinking skills is facilitated.

- Deep knowledge of the subject matter is demonstrated.

- The intellectual, social, emotional, and physical needs of the students is understood

   (Woods, 2018).

Performance Standard 2: Instructional Planning

Instructional planning required the teacher to use state standards, effective strategies, and data to meet the differentiated needs of all learners (Georgia Department of Education, 2013). Novice teachers plan one-size fits all lessons while expert teachers build differentiation into their lessons to meet the needs of all the learners. The differentiated lesson included a blend of flexible grouping such as whole group, small group, and individualized instruction (Good & Brophy, 2004; Livingston & Borko, 1989; Sabers, Cushing, & Berliner, 1991). In addition, effective teachers planned for and made greater use of interdisciplinary connections to the curriculum (Morris & Reardon, 2017). Effective teachers adapted the instruction to recognize the diversity in students' backgrounds, readiness, language, and learning preferences (Dixon, Yssel, McConnell, & Hardin, 2014). The National Academy of Education Committee on Teacher Education (NAWCTE) reported that effective teachers planned lessons based on the students' prior knowledge and level of development and adapted the curriculum to meet the needs of the students (Stewart, Scalzo, Merino, & Nilsen, 2015). Connor et al. (2013) reported that student engagement increased when instruction was delivered at individual achievement levels. Effective teachers planned for personalized instruction that catered to individual learners needs. The components of personalized instruction included the following: (a) Students were offered multiple ways to demonstrate learning, (b) students were grouped in a flexible manner to respond to individual needs, and (c) scaffolding was provided for best learning results (Goodwin, 2017; Waldrip, Yu, & Prain, 2016).

According to the Georgia Department of Education TAPS rubric, sample performance indicators for lesson planning include the following:

- Student data to inform lesson plan decision making was used.

- Instruction to meet the needs of all of the students was developed.

- Plans were adapted when needed.

- Used real world resources to plan differentiated instruction (Woods, 2018).

Performance Standard 3: Instruction Strategies

Instructional strategies consisted of the teacher using research based instructional strategies to engage students in active learning to facilitate the acquisition of knowledge (Georgia Department of Education, 2013). Making instruction relevant based on real-world problem solving was considered one of the most power instructional strategies a teacher can use to increase academic learning. Real-world instructional strategies increased student engagement as the learning was more authentic (Schroeder, Scott, Tolson, Huang, & Lee, 2007; Wenglinsky, 2004).

According to the Georgia Department of Education TAPS rubric, sample performance indicators for instructional strategies include the following:

- Students were engaged in active learning.

- Students were engaged in real-world problem solving.

- Students were engaged in authentic and relevant ways (Woods, 2018).

Performance Standard 4: Differentiated Instruction

Differentiated instruction challenged the teacher to provide knowledge based on the needs of the individual learner (Georgia Department of Education, 2013). Weiss and Miller (2006) described differentiation as the keystone of teaching. Strong (2007) synthesized multiple

studies on student achievement and perceptions of teacher effectiveness. Stronge's studies stated

that effective teachers understood the abilities, achievement, learning styles and needs of each

individual learner. The research suggested that effective teachers emphasized individualized

learning. A meta-analysis of 36 research studies examined the effects of using student learning

styles on student achievement suggested that instruction based on the learning styles of the

learners significantly impacted student engagement and achievement. The meta-analysis also

revealed that the mean achievement of at-risk students increased one standard deviation when

teachers accommodated their learning styles (Dunn et al., 1995). Tomlinson and Moon (2013)

reported that effective teachers recognize the needs of the individual and group as a whole and

accommodated the student needs through differentiation.

Personalized learning has become the most recent version of differentiation. It is a

teaching concept that has gained popularity in the United States and internationally. Personalized

instruction is similar to instructional differentiation, however; with personalized learning,

students have more input and control of the learning. With personalized learning, students drive

their own learning and take responsibility for their learning to a greater degree. For example, the

personalized learning concept required students to set goals, make choices and monitor their

progress (Basham, Hall, Carter, & Stahl, 2016).

According to the Georgia Department of Education TAPS rubric, sample performance

indicators for differentiated instruction included the following:

- The instructional content, process and product are differentiated to meet the needs of
  the students.

- Flexible grouping practices are used.

- Diagnostic, formative, and summative assessments are used to inform instructional adaptations (Woods, 2018).

Performance Standard 5: Assessment Strategies

Interim assessment strategies are on the vanguard of educational research. Interim assessment centers on active feedback that assisted teachers and students in the learning process (Williams et al., 2014). Assessment strategies involved the use of a variety of diagnostic, formative, and summative assessment to monitor student progress toward mastery of the standards (Georgia Department of Education, 2013). Assessment of learning included a variety of measures such as observations, exit tickets, interest surveys, criterion referenced, and normed referenced tests to monitor student progress (Tomlinson, 2007). Assessment for learning required the teacher to gather and analyze the data to monitor student mastery of the standards and to make instructional decisions to adjust instruction as needed (Gronlund, 2006). Furthermore, effective teachers used high quality questions to assess and to monitor the learning process. Questions are most valuable when students have an opportunity to demonstrate understanding through classroom discussion (Wiggins & Wilbur, 2015). Wait time was an important aspect of questioning. Several studies have suggested that the use of wait time can result in higher student achievement and increased student participation (Duckor, 2014).

According to the Georgia Department of Education TAPS rubric, sample performance indicators for assessment strategies included the following:

- Assessments are aligned with established curriculum and benchmarks.

- Assessments are modified based on the needs of the students.

- Informal, formal, diagnostic, formative, and summative assessments are used to inform instructional decision-making.

- The teacher collaborated with other teachers to create common assessments (Woods, 2018).

Performance Standard 6: Assessment Uses

Classroom assessment involved the collection of data to inform instructional decision-making (Miller, Linn, & Gronlund, 2013). Effective teachers used a balance of formative and summative assessments and transformed the data into instructional strategies that met the needs of the students (Bertrand & Marsh, 2015). Formative assessment measures were used to diagnose student learning, identified study gaps in learning, and redirected teaching and learning (Williams et al., 2014). Assessment data was used to set immediate, on-going and annual goals for students (Kerr, Marsh, Ikemoto, Darilek, & Barney, 2006). In addition, constructive feedback based on assessments, was considered an effective tool to communicate student progress to both students and parents (Chappuis & Stiggins, 2002). A mastery instructional environment was achieved with specific and corrective feedback to guide students toward mastery of the standards (Smail & MacDonald, 2015). Effective teachers constantly monitored students' understanding of the standards and adjusted their instruction based on the needs of the students (Parsons & Vaughn, 2016). High performing schools used assessment data to set student goals and adjusted instruction (Leithwood & Azah, 2017). Case studies on high performance urban school districts revealed that data was used to make instructional decisions and trained principals on assessments for learning (Schildkamp, Poortman, & Handelzalts, 2016). In addition, Effective teachers used assessment to reflect upon the effectiveness of instruction (Huguet, Marsh, & Farrell, 2014).

According to the Georgia Department of Education TAPS rubric, sample performance indicators for assessment used include the following:

- Diagnostic data was used to set learning goals.

- A variety of formative and summative assessments were used to monitor mastery of the standards.

- Assessment results were used to guide and adjust instruction.

- Frequent feedback was provided.

- Students were taught to self-assess (Woods, 2018).

Performance Standard 7: Positive Learning Environment

Effective teachers created a positive, warm, and welcoming learning environment (Sandilos et al., 2017). Research indicated that a positive learning environment shaped student's emotional, cognitive, motivational, and behavioral domains (Fraser & Fisher, 1982). Effective classroom teachers praised good behavior rather than criticize bad behavior (Greenberg et al., 2014). The effective teacher used proactive measures to redirect behavior and decreased the time spent on disciplinary actions (Hamre et al., 2013). Effective teachers reinforced and reiterated the classroom expectations. The effective teacher used strategies to redirect negative student behavior (Perle, 2016). Classroom teachers with effective classroom management skills increased student engagement (Fitzgerald, Dawson, & Hackling, 2013).

Studies of teacher personality traits that contributed to the positive learning environment included the following:

- Extraversion: the effective teacher collaborated with peers, optimistic, energetic, and had a sense of humor.

- Agreeableness: the effective teacher was helpful with others, friendly, and was cooperative.

- Conscientiousness: the effective teacher was eager, ambitious, and reliable.

- Emotional balance: the effective teacher was even-tempered, calm, and relaxed.

- Openness to change: the effective teacher was curious and flexible (Buttner, Pijl, Bijstra, & van den Bosch, 2015).

According to the Georgia Department of Education TAPS rubric, sample performance indicators for a positive learning environment included the following:

- Clear expectations of classroom routines, class rules, and procedures were established.

- Fairness, caring, respect, and enthusiasm for teaching was modeled.

- Respect for student's diversity was promoted.

- Actively listened to the student voice.

- Created a warm and attractive classroom (Woods, 2018).

Performance Standard 8: Academically Challenging Environment

An academically challenging environment is defined when the teacher created a student-centered environment whereby teaching and learning occurred at high levels (Georgia Department of Education, 2013). Prominent characteristics of an academically challenging environment included active engagement where learners were able to see the relationship between the knowledge to be gained and the real-world application. In addition, non-competitive collaborative environments increased the academic rigor. Furthermore, learners experienced information from a variety of viewpoints. In challenging academic environments, learners assumed responsibility for their own learning Schoen (2008). When students took an active role in their learning, school completion increased. Goal setting skills helped students develop independence (Chan et al., 2014). Further, teachers who set high expectations improved the performance of their students. High expectations were a key component of student success. Effective teachers set high expectations for themselves and their students. High teacher

expectations were a significant predictor of student academic success (Rubie-Davies, Peterson, Sibley, & Rosenthal, 2015). Furthermore, effective teachers provided scaffolding and encouraged students to take academic risks (Dietrich, Dicke, Kracke, & Noack, 2015; Pitzer & Skinner, 2017).

According to the Georgia Department of Education TAPS rubric, sample performance indicators for an academically challenging learning environment included the following:

- The message that mistakes are part of the learning process was conveyed.

- Students were provided with relevant learning activities.

- Students were encouraged to take academic risks.

- High but reasonable expectations for learning was communicated (Woods, 2018).

Performance Standard 9: Professionalism

Teachers are expected to exhibit a commitment to professional ethics and the school mission through professional growth opportunities (Georgia Department of Education, 2013). Carter (2003) conducted a study to determine the common characteristics of effective teachers. The following themes were most frequently mentioned: (a) Exceptional teachers were flexible, (b) had excellent organizational skills, (c) loved working with children, and (d) had high expectations for all learners. Stronge (2007) suggested effective teachers shared their ideas, led committees, and mentored new teachers. In addition, effective teachers pioneered innovative educational reform. Further, effective teachers were described as having grit. Gritty individuals not only show up for work, they set long term goals and made an effort to achieve those goals even in the absence of positive feedback (Robertson-Kraft & Zhang, 2018).

According to the Georgia Department of Education TAPS rubric, sample performance indicators for professionalism include the following:

- Respected and maintained confidentiality.

- Maintained professional demeanor.

- Participated in ongoing professional growth.

- Engaged in activities outside of the classroom intended for school and student enhancement (Woods, 2018).

Performance Standard 10: Communication

Effective teachers communicated subject matter with clarity. An effective teacher clearly communicated expectations to both students and parents. In addition, the effective teacher communicated expectations for student growth and how the students were assessed (Titsworth, Mazer, Goodboy, Bolkan, & Myers, 2015). Effective teachers consistently communicated with students, parents, colleagues, and stakeholders (Georgia Department of Education, 2013). Effective teachers collaborated with colleagues and understood that educating a child cannot be effectively executed by one person (Sachs, 1999). In addition, researchers believed effective teachers understood the importance of reaching out to parents, families, and communities to improve student behavior and overall academic success (Fan & Chen, 2001; Hill & Tyson, 2009).

According to the Georgia Department of Education TAPS rubric, sample performance indicators for communication included the following:

- Used verbal and nonverbal communication to foster positive interactions.

- Shared instructional goals, expectations, and progress with students and parents in a timely manner.

- Created a climate of accessibility.

- Used multiple modes of communication (Woods, 2018).

With the passage of Senate Bill 364, all school districts in Georgia have the option to reduce the number of teacher observations required each year (Woods, 2018). The six observation data points were no longer be required for all teachers. Effective teachers were eligible for fewer classroom observation visits while teachers in the following six categories would continue to be on the full formative assessment classroom observation rotation:

- 3 years or less of teaching.

- Teaching out of field.

- New position (change in field of certification).

- Out of the profession for longer than one year.

- Moving into the state.

- Evaluation performance of needs improvement or ineffective.

Student Surveys of Instructional Practice

A review of the literature on K-12 surveys of student perceptions was limited to just a few studies since 2000 (Hanover Research, 2013). Wilkerson, Manatt, Rogers, and Maughan (2000) researched student feedback in a 1976 Wyoming study. Student ratings were found to be highly significant in predicting student achievement in reading. The Wilkerson study found that student ratings were more highly correlated with student achievement than any other measure of teacher effectiveness (Kring & Johnson, 2014) . In addition, student surveys were considered the best predictor of student achievement across all subject areas (Bell et al., 2008). Peterson, Wahlquist, and Bone (2000) conducted a study that involved 9,765 student surveys at the elementary, middle, and secondary levels. The results of this study indicated that the use of student surveys was a valid measure of teacher evaluation. A study of schools in Cyprus conducted by Kyriakides (2005) included a student survey of instructional practices. The results

of the study revealed a correlation between the student-teacher relationship and the cooperation

between student and teacher with achievement gains in math and Greek language. Follman

(1992) conducted an empirical review of the literature on the use secondary school student

ratings to evaluate teacher effectiveness. The Follman research noted that students were the most

direct clients of teachers thus had a deeper experience with the teacher than evaluators, peer

evaluators, peers or parents. Furthermore, the Follman study indicated that secondary students

were proven capable of providing reliable ratings (Bell et al., 2008). In the Worrell and

Kuterbach (2001) study, high achieving secondary students were reported to be capable of rating

teacher behaviors with reliability and validity measures similar to college students. In addition,

the Worrell and Kuterbach study noted that student surveys were cost efficient and time efficient.

They cautioned the use of student surveys as stand-alone measures of teacher evaluation.

Overall, both studies encouraged the use of student rating surveys as a component of the teacher

evaluation process.

Research regarding the use of student surveys to evaluate teacher effectiveness revealed

benefits. For example, Stronge and Ostrander (1997), argued that students had direct knowledge

of what was going on in the classroom on a regular basis. Factors associated with teacher

behaviors in the classroom that influenced student achievement have been extensively

researched. Brophy and Good (1984) linked student achievement to pacing and quality of

learning. They argued that the pacing of the course material should move according to the

student's abilities. According to Aleamoni (1999) researched the use of student ratings and

continued to support the position that information gleaned from student rating helped the

instructor to improve effectiveness. Follman (1992) concluded that the student ratings were

justified as one of the several criteria used in professional teacher evaluations.

In response to the RTTT contest initiated in 2009, the use of student perception surveys in K-12 education gained momentum. The Tripod Survey and My Student Survey gained attention as reliable and valid student perception surveys (MET Project, 2012). The researchers of the MET project found that the results of student surveys in one class could predict large differences in student achievement gains in other classes taught by the same teacher (Muñoz & Dossett, 2016). The 36-item Tripod Survey was comprised of the following seven theoretical domains of teaching: care, confer, captivate, clarify, consolidate, challenge and control (Wallace, Kelcey, & Ruzek, 2016).

Ryan Balsh, a Vanderbilt researcher developed the My Student Survey. The My Student Survey was validated in a large-scale pilot, the Georgia Race to the Top initiative in spring 2011 (Balch, 2012). The My Student Survey was administered to over 12,000 students in grades 6-12 in seven Georgia school districts. During the 2012-2013 school year, the My Student Survey was administered to 50,000 students. Full implementation of the student perception survey was administered to all students in Georgia public schools during the 2014-2015 school year (Hanover Research, 2013). Bell et al. (2008) identified the following advantages of using student perception surveys as a component of teacher evaluation: a) The student surveys were cost effective, (b) could be collected anonymously, (c) required minimal training, (d) was time efficient, and (e) had the ability to track changes over time.

The 2014 Teacher Keys Effectiveness System model included student perception survey data regarding instructional practices (Georgia Department of Education, 2014). The data from the student perception survey was used to serve as supporting documentation of the data collected during classroom observations. Surveys of instructional practice were administered to students in grades 3-5, 6-8, and 9-12. The student perception data scores were used to inform the

teacher's formative and summative performance ratings on the following TAPS standards: standard three instructional strategies, standard four differentiated instructions, standard 7 positive learning environment, and standard eight academically challenging environments. If the results from the student perception survey and the TAPS ratings were inconsistent, the evaluator was required to provide justification for commentary to explain why the performance rating was not aligned with the student survey rating. The Senate Bill 364 passed in 2016, declared the use of student surveys as part of the overall teacher evaluation system as optional and would no longer be a requirement (Woods, 2018).

Despite the advantages of student perception surveys, student raters of teachers unlike adult raters of teachers have no formal training prior to data collection (Wallace et al., 2016). If students do not form a positive relationship with their teacher, it is within their control to limit interaction with learning and with the learning environment.

Student Growth Model

Throughout the Georgia RTTT grant process, the student growth model was at the heart of the teacher and leadership evaluation system (Woods, 2018). The Georgia Student Growth Model provided important information on how well all students are progressing whether or not they currently demonstrate academic proficiency. The student growth model component of the TKES would serve a lagging data measure. When available, the prior year's growth measure would be used to inform the current teacher summative evaluation. Student growth percentiles would be used to generate the student growth model score.

The impact of NCLB accountability systems to determine adequate yearly progress was profound. Betebenner (2011) traced the interest in student growth percentiles to the November 2005 announcement from Secretary of Education Spelling, which permitted states to use growth

models for compliance with NCLB achievement mandates and the RTTT competitive grants program. Student growth percentiles expressed students' current observed scores as a percentile rank in a distribution of scores among students with similar prior test scores. A common concern for student growth percentiles was the potential bias due to test measurement error (McCaffrey, Castellano, & Lockwood, 2015).

Accountability measures such as student growth percentiles attempted to estimate the teacher's contribution to student achievement, the teacher effect (Betebenner, 2009). The teacher effect or contribution attempted to quantify the impact the teacher had on similar students assigned to them for instruction. The best description regarding student achievement of a single student over time was best served by the identification of the student growth percentile.

One-half of the teacher evaluation measure was based on the results of the Georgia Milestones next generation standardized assessment reported as the Georgia Student Growth Model (GSGM) percentage in the State Longitudinal Data System (Rickman, 2014). The main purpose of the GSGM was to improve teaching and learning and to inform accountability of teacher effectiveness. As part of Georgia's RTTT application, Georgia worked with the National Center for the Improvement of Education Assessments, Inc.

The GSGM had three main purposes:

- Provided students, parents, educators, and the public information on student progress.

- Informed school and district accountability as measured by the College, Career Readiness. Performance Index (CCRPI).

- Contributed to the new teacher and leader evaluation system.

The GSGM answered critical questions such as; did the student grow more or less than academically compared to similar students (US Department of Education, 2012). Are students

on track to reach or exceed proficiency growth? The methodology of the GSGM model described a student's growth as compared to other students in Georgia in the same grade or content area with similar academic test score history. The primary advantage of using the student growth model was that results were reported in percentiles, a system already known by parents and teachers. Another significant factor that contributed to the selection of this growth model was that it allowed all students to demonstrate growth regardless of their achievement at the beginning of the year. All students' prior high or low achievement had the same opportunity to demonstrate.

The Georgia Department of Education described student growth in terms of percentiles and captured student progress throughout the course of an instructional period (Georgia Department of Education, 2013). Growth percentiles ranged from one to 99. Lower percentiles indicated lower academic growth while higher percentiles indicated higher levels of academic growth. High performing students as well as struggling students were able to demonstrate levels of growth. For example, very high achieving students indicated low growth if they scored lower on the current assessment as compared to high achieving students in the same grade and subject with similar testing histories. The implementation of the student growth model supported the improvement of teaching and learning, enhanced accountability and served as one of several data points related to teacher effectiveness. A student's growth percentile was defined by comparing their current achievement relative to their peer group with identical prior achievement on standardized assessments (Betebenner, 2009). Adequate growth was defined as needed to establish thresholds for growth for each student to make accurate judgements. The student growth was measured with pre-established achievement targets and a period to reach the target for each student against which the growth was measured. Catching up and keeping up was

defined as adequate growth. Catching up defined students currently not proficient and were expected to reach proficient within the next four years. Keeping up defined students who were at or above proficient levels and were expected to remain at or above proficient over the next four years. Moving up defined students who were currently proficient and expected to reach advanced within the next four years (Betebenner, 2011).

The following were established outcomes of the student growth model:

- Teachers had clear understanding of growth needed for their students to be proficient.

- Teachers held high expectations for all students and would have a better understanding of how their teaching influenced student learning.

- Teachers were provided with reliable data regarding academic growth of students (US Department of Education, 2012).

Recent research has demonstrated that SGP generated from standardized tests scores have been plagued with large estimation errors (Lockwood & Castellano, 2017; Monroe & Cai, 2015; Shang, VanIwaarden, & Betebenner, 2015). These errors jeopardized the validity of inferences made from the SGP's (Lockwood & Castellano, 2017).

Teacher Effectiveness Measure (TEM)

The Teacher Effectiveness Measure (TEM) the annual teacher evaluation was revised once again and now consisted of the following three parts: Teacher Assessment on Performance Standards (TAPS), Professional Growth, and Student Growth. The three components that contributed to the overall TEM score for each teacher. The weights of each component are as follows:

- Professional Growth 20%

- Student Growth 30%

- TAPS 50% (Woods, 2018).

To date, large amounts of money have been invested in the development and implementation of new teacher evaluation systems to filter out poor quality teachers and to improve student outcomes (Hallinger, Heck, & Murphy, 2014). The newly designed multi-pronged teacher evaluation systems have been deemed controversial in that the greatest proportion variability in student learning outcomes is determined by family background. Other concerns with the newly designed multiple measures teacher evaluation systems included the following: the assumed magnitude of the teacher effect on growth in student learning is sufficient enough to warrant the use of student achievement data in evaluation systems and the reliability to capture and differentiate the influence of teachers on student achievement.

Georgia Milestones Next Generation Assessments

The implementation of rigorous performance standards and assessment landscape was a critical component of the RTTT Georgia application (Georgia Department of Education, 2014). Beginning in 2014, Georgia implemented a next generation assessment known as the Georgia Milestones. The Georgia Milestones assessment was rolled out in conjunction with the RTTT plan. Results of the Georgia Milestones assessment was used as a litmus test of academic progress and was used to inform school accountability through measures such as the CCRPI.

Every Student Succeeds Act (ESSA)

The Every Student Succeeds Act (ESSA) in December of 2015 afforded states the autonomy to design and implement newly designed teacher evaluation systems independent of federal influence or guidelines (Sawchuk, 2016). The new law did not require states to create a teacher evaluation system based on student test scores. Since the passage of ESSA, most states have continued to tinker with their teacher evaluation systems. The student growth model has

continued to be a controversial component of newly designed teacher evaluation systems. A number of states have moved away from the student growth model component by postponing the inclusion of the student growth model into the overall teacher evaluation, by reducing the percentage of the evaluation breakdown or eliminating the student growth measure all together (Will, 2017). In Georgia, the teacher evaluation measure (TEM) will be generated using the student growth model data during the 2020-2021 school year (Woods, 2018). The American Federation of Teachers and the National Education Association filed more than a dozen lawsuits related to the student growth model component of the newly designed teacher evaluation system (Loewus, 2017). Since 2015, Alaska, Arkansas, Kansas, Kentucky, North Carolina, and Oklahoma have dropped the student growth measure component of the teacher evaluation system. Connecticut, Nevada, and Utah have passed policies that prohibit the use of standardized test scores for evidence of student learning (Loewus, 2017).

Critics of ESSA have claimed that state education departments have limited expertise to fully design effective teacher evaluation systems (Steinberg & Kraft, 2017). While the plans of state applications have varied, the majority of the plans included the following two components: a value-added model and ratings of teacher qualities using classroom observations (Polikoff, 2015). ESSA also represented a significant devolution of power over public schools K-12 from the federal government to the states. Under ESSA, states that previously adopted the common core in exchange for regulatory relief now have the opportunity to replace the common core standards. ESSA also afforded states far greater latitude in the implementation of annual standardized testing (Heise, 2017).

RTTT Implementation Status

The United States Government of Accountability Office (GAO) was asked to review the extent to which the 2010 RTTT grantee states have implemented their teacher and leader evaluation systems, the challenges the grantee states have faced with implementation, and how the United States Department of Education helped grantee states meet their RTTT objectives for teacher and leader evaluation systems (US Government Accountability Office, 2013). In July 2012, the US Department of Education placed Georgia on a high-risk status as intensive attention and support was needed to meet RTTT goals. The Georgia teacher and leader evaluation portion of the RTTT grant was placed on high risk due to overall strategic planning, evaluation and project management of the evaluation system. Georgia requested two significant changes to the evaluation system of the approved plan. As a result, Georgia was required to give monthly updates to the US Department of Education regarding the working plan on teacher and leader evaluations. As of July 2013, Georgia continued to remain on the RTTT high-risk list as the US Department of Education had concerns with the implementation of the evaluation system. If a grantee state failed to comply with terms of an award, the US Department of Education could take one or more of the following actions: withhold cash payments pending corrective measures, wholly or partially suspend or terminate the current award, withhold further awards for the program, and or take legal action. As of 2015, the United States Department of Education awarded 19 states with more than $4.35 billion to implement the Race to the Top school reforms (Ballou & Springer, 2015).

By the 2014-2015 school year, 78% of all states and 85% of the largest school districts revised and implemented a newly designed teacher evaluation system (Steinberg & Garrett, 2016). Critics of the newly designed teacher evaluation systems have focused on the use of

student achievement component of the teacher evaluation. Teacher evaluations based on the indices of the teacher's value-added to student achievement is inconsistent from year-to-year. This inconsistency is at the heart of the arguments against the use of VAM for teacher evaluation. The instability of the teacher's value-added score may lead to some teachers being incorrectly classified as highly effective or highly ineffective based on a single year's results. In spite of these stability concerns, states and school districts continue to move forward with the use of student achievement data for evaluative purposes (Polikoff, 2015).

Summary

In the past 40 years, federal legislators have raised equality in education, teacher, and school accountability measures(US Department of Education, 2012). An historical review of sweeping legislative educational mandates along with the infusion of billions of dollars into the public school system have left legislators frustrated with the inability to truly hold teachers and schools accountable for closing the achievement gap. The Georgia RTTT educational policy reform was hopeful that teacher effectiveness measures could finally take a foothold in student achievement (Georgia Department of Education, 2014). As a result of the Georgia RTTT award, a new teacher evaluation system to increase teacher effectiveness became fully implemented during the 2014-2015 school year. The newly designed teacher evaluation coupled with a next generation Georgia Milestones statewide assessment represented paradigm shifts in teaching, learning, teacher accountability, next generation assessments, and ultimately student achievement.

CHAPTER THREE: METHODS

Overview

The purpose of this qualitative case study was to explore the perceptions, feelings and thoughts of 15 middle school teachers regarding teacher effectiveness and the influence on student achievement. The data analysis was built using the theoretical framework of the grounded theory; therefore, I implemented the strategy of relying on theoretical propositions (Creswell, 2013). The theoretical propositions data analysis strategy was reflected in the research questions, review of the literature, and new propositions. These propositions shaped the data collection process and guided the analytic priorities. With the individual interviews, classroom observations and focus group interviews, I collected data on teacher effectiveness. The individual transcripts and the focus group transcripts were read several times to immerse myself in the details and to get a sense of the whole before breaking in down into units. Memos were used during the field stage and in the analysis stage. These memos contained hints, clues and suggestions that would be used in the preliminary sets of interpretation. The next step involved categorizing and coding the data. Themes also called categories which are broad units of the information that consist of codes were aggregated to create a common idea. The next step involved interpretation of the data. Lincoln and Guba (1985) described the interpretation process as making sense of the data in lessons learned. Finally, I created an in-depth picture of the cases using narrative and tables.

This chapter includes an overview, design, research questions, setting, participants, procedures, data collection, data analysis, trustworthiness, and summary.

Design

Several designs were considered for this case study. The instrumental case study was

eliminated as a research design as it is a better fit for a case study in need of a general

understanding in which there is puzzlement (Stake, 1995). The case study was selected as the

most appropriate design to explore the perceptions, feelings, thoughts and feelings of 15 middle

school teachers on the influence of teacher effectiveness on student achievement. The

components of the research design for this study included the following: (a) The research

questions, (b) propositions, (c) process of analysis, (d) linking the data to the propositions, and

(e) the interpretation of the findings (Yin, 2014). The goal of the research design is to collect

data, analyze the data and report the data accurately. The following five techniques were

considered for the analytic strategy for the study: (a) Pattern matching, (b) explanation building,

(c) time-series analysis, (d) logic models and, (e) cross-case synthesis. Yin states that pattern

matching in case study analysis is the most desirable technique. The pattern matching technique

compares an empirically based pattern with one that was predicted prior to the collection of data.

I purposefully did not choose the pattern matching technique due to the nature of predicting

outcome prior to the collection of data. The explanation building technique is described by Yin

as complex and difficult to measure. Therefore, due to the level of complexity the explanation

building technique was eliminated as a technique possibility. The time-series analysis can

involve many intricate patterns and have been used in psychological studies with single subjects.

This technique was eliminated as it was for single subject cases. The logic model is a technique

commonly used in case study evaluations and in studying theories of change. For this reason, the

logic model analysis technique was eliminated. Yin described the cross-case synthesis technique

relevant for single or multi-case studies. Yin also reported that the cross-case synthesis technique

was easier to implement and that the findings more robust. For this reason, I choose the cross-case synthesis analytic technique.

Research Questions

The following questions guided this case study:

- Research Question 1: How do effective teachers implement professional knowledge and instructional planning to influence student achievement?

- Research Question 2: How do effective teachers implement differentiation and instructional strategies to influence student achievement?

- Research Question 3: How do effective teachers implement and use assessment strategies to influence student achievement?

- Research Question 4: How do effective teachers create a positive and academically challenging environment to influence student achievement?

- Research Question 5: How do effective teachers communicate to influence student achievement?

Setting

The study was conducted at four schools in a school district located in Georgia. Each research site was assigned a pseudonym to protect the privacy of the participants. Franklin Middle School had a student population of approximately 1,232 students (School District, 2015). The racial/ethnic makeup of the school included the following: White 66.2%, Black 15.3%, Hispanic 10.3%, Asian 4.2%, Multiracial 3.7%, American Indian or Alaskan Native 0.3% and Hawaiian/Pacific Islander 0.1%. The percentage of economically disadvantaged was 23.7% while the percentage of students with disabilities was 16.6%. The percentage of gifted students was 30.0% and the percentage of English Language Learner was 1.2%. Data from the overall

2015 ITBS composite score for 7th grade was 72.3% which represented the percentage of students at or above 50th percentile on Complete Composite Score.

Lincoln Middle School had a population of 1,004 students (School District, 2015). The racial/ethnic makeup of the school included the following: White 34.7%, Black 31.2%, Hispanic 18.9%, Asian 10.3%, Multiracial 4.4%, American Indian or Alaskan Native 0.5% and Hawaiian/Pacific Islander 0.1%. The percentage of economically disadvantaged was 47.8% while the percentage of students with disabilities was 14.7%. The percentage of gifted students was 18.1% and the percentage of English Language Learner was 4.3%. Data from the overall 2015 ITBS composite score for 7th grade was 57.3% which represented the percentage of students at or above 50th percentile on Complete Composite Score.

Eisenhower Middle School had a population of 958 students (School District, 2015). The racial/ethnic makeup of the school included the following: White 66.6%, Black 11.3%, Hispanic 6.7%, Asian 8.8%, Multiracial 6.5%, American Indian or Alaskan Native 0.1% and Hawaiian/Pacific Islander 0.1%. The percentage of economically disadvantaged was 14.5% while the percentage of students with disabilities was 14.5%. The percentage of gifted students was 41.3% and the percentage of English Language Learner was 1.3%. Data from the overall 2015 ITBS composite score for 7th grade was79.1% which represented the percentage of students at or above 50th percentile on Complete Composite Score.

Jefferson Middle School had a population of 1,047 students (School District, 2015). The racial/ethnic makeup of the school included the following: White 45.9%, Black 26.7%, Hispanic 16%, Asian 4.4%, Multiracial 5.7%, American Indian or Alaskan Native 0.6% and Hawaiian/Pacific Islander 0.5%. The percentage of economically disadvantaged was 44.7% while the percentage of students with disabilities was 17.3%. The percentage of gifted students

was 19.3% and the percentage of English Language Learner was 2.6%. Data from the overall 2015 ITBS composite score for 7th grade was 61.3% which represented the percentage of students at or above 50th percentile on Complete Composite Score.

Participants

IRB approval was attained prior to the implementation of the research study. See Appendix A for the Liberty University IRB approval letter. Research site approval was granted by the school district before the research study was conducted. See Appendix B for the school district research site approval letter.

According to Patton (2015) the selection of depth in research involved a smaller number of people in the study. In-depth information can be very valuable especially if the cases prove to be information rich. The intent of this study was to focus on depth and therefore the sample size was limited to 15 teacher participants. Purposive sampling was used to select the cases that were rich in the information needed for the purposes of the study (Gall et al., 2006). The participants met the criteria of having a level IV mean student growth model score of 65% or higher as reported in the GDOE State Longitudinal Data System. The teacher participants had a level IV mean student growth model score at least one time in the past three years. A consent form was signed by all 15-teacher participants before the research was conducted. See Appendix C for the teacher participant form.

Procedures

IRB approval was obtained before the research was conducted. The school district approval to conduct research was also obtained to conduct research at four middle schools. Participants signed consent forms before the research was conducted. All 15 teacher participants signed the consent form prior to conducting research. Data was collected through open-ended

individual interviews, classroom observations and open-ended focus group interviews. The individual interviews, focus group interviews and the classroom observations were pre-arranged with the teacher participants. The focus group and individual interviews were audio recorded to provide assistance with the transcription process. A semi-structured questioning format was used for the one-to-one interview. Next, a semi-structured questioning format was used with the four focus group interviews. An observation rubric was used along with field notes during the classroom observational. To ensure privacy and confidentiality, pseudonyms were assigned to the participants and the research sites.

Data Collection

For the collection of data from the individual interviews, the researcher prearranged a meeting with the teacher participants at their school and at a time that was convenient for the teacher. Prior to the interview, the teacher participants were informed that the interview would take approximately one hour. The teacher participants were also informed that a set of semi-structured interview questions would be used for the interview process. The individual interviews were conducted in the teacher's classroom. The individual interviews were audio recorded and later professionally transcribed. To ensure privacy and confidentiality, pseudonyms were assigned to the teacher participants.

For the collection of data from the focus group interviews, a prearranged meeting was scheduled for the teachers who were employed at the individual research site. A total of four focus group interviews were conducted at the four middle school research sites. Prior to the focus group interview, the participants were informed that the interview would be conducted with the use of semi-structured interview questions and that the interview would take approximately one hour. The focus group interviews were audio taped and later professionally transcribed.

For the classroom observations, the data and time was prearranged with the teacher participant prior to the classroom observation. The researcher used a teacher observation rubric based on the ten Georgia teacher performance standards. Field notes and memos were used to make comments during the classroom observation. Each classroom observation lasted approximately 30 minutes.

Individual Interviews

In qualitative research, interviews are the most commonly used source in case study research (Rubin & Rubin, 2012). Interviews resembled guided conversations rather than formal inquiry. The stream of questioning was likely to flow naturally rather than be rigid. The interview allowed the researcher to obtain descriptions and interpretations of others (Stake, 1995). Merriam (2009) suggested the type of interview to be conducted by determining how much structure was needed. For example, a highly structured interview was most often in the form of a survey. A semi-structured interview was used both for structured and unstructured questions. The semi-structured interview allowed for more flexibility to access information from the participants. An unstructured interview involved the use of a set of informal questions to develop more questions for other interviews.

For the purposes of this study, a semi-structured interview format with open-ended questions was conducted that allowed each participant to fully describe their own personal experiences. Creswell (2013) suggested that an audiotape should be used during the interview and to later transcribe the interview. Before conducting the individual interviews, a mock interview was conducted with non-participants to determine interview wording effectiveness.

Semi-Structured Open-Ended One-to-One Interview Questions

- What are some ways that you have added relevancy to the curriculum and helped students make real-world connections?

- How do you display an understanding of the intellectual, social, emotional and physical development of the student age group?

- How do you get to know the individual learner regarding their learning abilities, prior achievement, cultural background and personal interests?

- How do you create an environment in which individual differences in ability, culture, academic needs and interest are respected to impact student achievement?

- How do you plan for the different needs of your students?

- How do you plan for a learner-centered environment that allows for student-choice, flexibility and independence?

- How do you integrate technology into instruction?

- How do you develop appropriate unit and daily plans?

- What is an example of a research-based strategy you have used to successfully engage students?

- In what ways do you use technology to promote a higher-level of learning?

- How do you stress student responsibility and accountability in mastery of the standards?

- How do you incorporate wait time along with purposeful questioning to reach higher order thinking skills?

- How do you offer multiple modes of learning for students through their learning style preference?

- How do you use flexible grouping to encourage peer interaction and to accommodate student needs?

- How do you provide remediation, enrichment and acceleration to further increase student learning of the material?

- Describe how you provide students with choices regarding the method to express the required learning.

- How are you using assessment data to plan your lesson or unit plans?

- How do you differentiate based on diagnostic data?

- How are you using formative assessments to adjust instruction?

- How often do you give homework and do you offer feedback on the homework?

- How do you use diagnostic assessment data to develop learning goals for students?

- How do you monitor students and use various types of data to assess student needs?

- How do you teach students to self-assess and to use metacognitive strategies in support of lifelong learning?

- How do you interpret and make inferences from data of teacher made assessments and standardized assessments regarding student progress toward mastery of the standards?

- How do you create a warm and respectful learning environment?

- How do you show that you value what students say?

- Describe interesting activities that you have implemented that increase student engagement and minimize disruption.

- How do you implement classroom rules of behavior fairly and consistently?

- How do you handle situations where students finish instructional tasks at different rates?

- What strategies do you use to get the class started without wasted time?

- How do you communicate high expectations for all learners?

- How do you design challenging but achievable tasks that are relevant to student's lives, experiences, or current events?

- What has been the most powerful professional learning experience this year?

- How have you been involved in the school improvement process this year?

- In what ways has your professional practice been influenced by the school improvement plan?

- Describe your professional reflective practices.

- How do you determine the best method for contacting parents?

- How do you use verbal and nonverbal communication to foster positive interactions and to promote learning in the classroom?

- Describe how you listen and respond with cultural awareness with students, parents, colleagues and community stakeholders?

- How do you create an open, warm and communicative climate in the classroom that invites student questions, comments and responses?

The questions used in the interview process were directly aligned with the TAPS evaluation tool (Georgia Department of Education, 2013). Each question was representative of the five domains and ten performance standards measured on the TAPS evaluation tool. See Appendix D for the semi-structured open-ended one-to-one interview questions.

Interview question one addressed how relevancy was added to the curriculum to allow students to make real-world connections. Marzano, McTighe, and Pickering (1993), found that teachers who lacked subject matter knowledge tended to be insecure when the teacher was teaching and his/her inability to provide effective explanations.

Interview question number two addressed how the teacher displayed their knowledge of the intellectual, social, emotional and physical development of the learner. Panasuk, Stone, and Todd (2002) revealed that teachers need a vast understanding of the various branches of human knowledge.

Interview question number three addressed how the teacher understood the students learning abilities, prior achievement, cultural background, and personal interests. Darling-Hammond (2001) reported that effective teachers used what they know about the student's learning ability, prior achievement, personal interests, and cultural background to decide what to teach and how to teach.

Interview question number four addressed how the teacher created a learning environment that respected differences in ability, culture, academic needs and interests. Marzano et al. (2001) indicated that effective teachers better understood the cultures and communities of their students.

Interview question number five addressed how the teacher planned for the different needs of the students. Misulis (1997) reported that planning is an essential tool for effective teaching. Haynie (2006) indicated that the most effective teachers collaborated with one or more teachers while planning.

Interview question number six addressed how the teacher planned for a learner-centered environment that allowed for student-choice, flexibility, and independence. Borko and

Livingston (1989) suggested that effective teachers were able to predict when some students may have problems.

Interview question number seven addressed how the teacher integrated technology into instruction. Sharma and Elbow (2000) mentioned that when teachers predominately used textbooks to deliver instruction, teachers were not able to reach the educational demands of critical thinking, skill building and inquiry about the real world.

Interview question number eight addressed how the teacher developed appropriate unit and daily plans. Haynie (2006) indicated that effective teachers collaborated with one or more teachers rather than planning alone.

Interview question number nine asked the participant to provide an example of a research based strategy that they used to successfully engage students. Allington (2002) reported that teacher's instructional practices have statistical and practical significance on student learning.

Interview question number ten asked how technology was used to promote a higher level of learning. Day (2002) reported that integrated technology had been associated with increased academic achievement.

Interview question number eleven asked how student responsibility and accountability in mastery of the standards was encouraged. Stronge (2007) reported that effective teachers know that no single classroom instructional practice is effective with all grades and all subject matter.

Interview question number twelve asked how wait time along with purposeful questioning to reach higher-order thinking skills was implemented. Tsai, Huang, Guo, and Chang (2007) mentioned that questioning along with wait time was a highly effective instructional tool.

Interview question number thirteen asked how multiple modes of learning were offered through learning style preferences. Dunn et al. (1995) reported that instruction based on learning styles increased positive student attitudes toward learning and achievement.

Interview question number fifteen asked how flexible grouping was used to encourage peer interaction and to accommodate student needs. Carolan and Guinn (2007) reported that differentiation to maximize learning was the cornerstone of learning.

Interview question number fifteen asked how remediation, enrichment and acceleration was provided to further increase student learning of the material. Tomlinson (2001) reported that effective teachers recognized individual and group differences and accommodated those differences in their instruction.

Interview question number sixteen addressed how choices were provided regarding the method used to express the required learning. Beck (2001) indicated that grouping practices that allowed for student-choice created a more meaningful learning opportunity for the student.

Interview question number seventeen asked how assessment data was used to plan for lesson or unit plans. Black and Wiliam (1998a) found that formative assessments had a significant impact on student achievement.

Interview question number eighteen asked how activities were differentiated based on diagnostic data. Natriello (1987) indicated that effective teachers used diagnostic information to determine student readiness for learning of new content.

Interview question number nineteen asked how formative assessments were used to adjust instruction. Stronge (2007) found effective teachers provided frequent assessments and constructive feedback to increase student achievement.

Interview question number twenty asked how often homework was assigned and was feedback provided. Stecker, Fuchs, and Fuchs (2005) reported that effective teachers assigned homework and provided feedback on the homework.

Interview question number twenty-one asked how diagnostic assessment data was used to develop learning goals for students. Natriello (1987) reported that assessment data could be used for setting annual, long term and short-term goals.

Interview question number twenty-two asked how students were monitored and were various types of data used to assess student needs. Stecker et al. (2005) noted that teachers significantly increased student learning with progress monitoring.

Interview question number twenty-three asked how students were taught to self-assess and to use metacognitive strategies in support of lifelong learning. Fuchs, Deno, and Mirkin (1984) noted that when teachers monitored student progress on a regular basis, students were more knowledgeable of their own learning and aware of their learning goals.

Interview question number twenty-four asked how data from teacher made assessments and from standardized assessments were reviewed regarding student progress toward mastery of the standards. Walker (1998) reported that effective teachers aligned learning outcomes, instructional strategies, and assessments to keep track of student learning.

Interview question number twenty-five asked the teachers how they created a warm and respectful learning environment. Cornell and Mayer (2010) stated that academic success for students relied upon a trusting and respectful relationship between the student and teacher.

Interview question number twenty-six addressed how the student voice was valued. Byer (1999) noted that there was a positive relationship between the student's perspective of classroom climate, and academic self-concept.

Interview question number twenty-seven asked the teacher to describe interesting activities that have been implemented to increase student engagement and minimize disruption. Wang et al. (1993) noted that classroom management included actions of the teacher that established order, engaged the students and reduced disruptions.

Interview question number twenty-eight asked how classroom rules of behavior were implemented fairly and consistently. Taylor et al. (1999) reported that the most accomplished teachers were experts in the area of classroom management.

Interview question number twenty-nine asked how instructional tasks completed at different rates were handled. Emmer and Stough (2001) reported that effective teachers applied preventative rather than reactive classroom management techniques.

Interview question number thirty asked what strategies were used to get the class started without wasted time. Miller-Cribbs, Cronen, Davis, and Johnson (2002) noted that highly effective teachers maximized instructional time.

Interview question number thirty-one asked how high expectations for all learners were communicated Miller-Cribbs et al. (2002) noted that students were more engaged when they received high expectations from their teacher.

Interview question number thirty-two asked how challenging but achievable tasks were designed to be relevant to student's lives, experiences, or current events. Corbett et al. (2002) noted that the effective teacher created interesting activities to increase student engagement in learning.

Interview question number thirty-three asked what has been the most powerful professional learning experienced this year. Yoon, Duncan, Wen-Yu, Scarloss, and Shapley

(2007) reported that teachers who received substantial professional development could help to increase student achievement.

Interview question number thirty-four addressed involvement in the school improvement process this year. Stronge (2007) reported that effective teachers were willing to share their professional practices and were informal leaders on the cutting edge of reform.

Interview question number thirty-five addressed in what ways professional practice had been influenced by the school improvement plan. Danielson (2001) noted that effective teachers were powerful resources to enrich the professional knowledge base and reflected upon what works and what does not work.

Interview question number thirty-six addressed professional reflective practices. Stronge (2007) reported that effective teachers continuously used self-reflection and self-evaluation tools to improve their professional practice.

Interview question number thirty-seven addressed the best method for contacting parents. Swap (1993) reported that effective teachers used multiple modes of communication between school and home.

Interview question number thirty-eight addressed verbal and nonverbal communication to foster positive interactions and to promote learning in the classroom. Worley, Titsworth, Worley, and Cornett-DeVito (2007) reported that effective teachers used a wide repertoire of communication skills such as humor and immediacy to create a positive learning environment.

Interview question number thirty-nine addressed how teachers listened and responded with cultural awareness with students, parents, colleagues, and community stakeholders. Epstein and Sheldon (2002) suggested that effective teachers created more connections among the school, family, and community.

Interview question number forty addressed how teachers created an open, warm and communicative climate in the classroom that invited student questions, comments and responses. Worley et al. (2007) noted effective teachers shared their personal experiences with their students to establish rapport with the students. In addition, effective teachers encouraged students to ask questions and to make comments.

Focus Group Interviews

Four focus group interviews were conducted at each of the four middle school research sites. Yin (2014) defined the focus group interview as the procedure called for the researcher to recruit and meet with a small number of persons. The researcher moderated a discussion with the focus group with the intention of deliberately obtaining views of each person in the group. Gall et al. (2006) described the focus group interview as a carefully planned discussion designed to obtain the perceptions of the participants in a non-threatening environment. The discussion was relaxed, comfortable, and often enjoyed by the participants. Participants in the focus group interview influenced each other by responding to ideas and comments in the discussion referred to snowballing.

One of the purposes of the focus group interview was to obtain data that may have been overlooked in the individual interviews and observation. The focus group interview provided the participants the opportunity to collaborate with other participants to discuss any thoughts that might add valuable data to the study.

The focus group interviews were prearranged and conducted at the four middle school research sites. The teacher participants were informed that the focus group interview would last approximately 60 minutes. The participants were also informed that a semi-structured interview question protocol would be used to conduct the focus group interview. The focus group

interviews were audio recorded and professionally transcribed. See Appendix E for the semi-structured focus group interview questions.

Observations

In qualitative research, the purpose of the observation was to provide a complete description of the phenomenon. The classroom observation provided an additional data point to verify information collected by other data collection methods (Gall et al., 2006). Strauss and Corbin (1998) described the three stages of observation as the descriptive stage, focused stage and selective stage. The descriptive stage involved observations that are general in nature and scope. The focused stage of the observation process involved focusing on the greatest areas of interest in the phenomenon and the collection of deeper information. The selective stage of observation shifted the research questions and deepened the understanding of the elements that emerged. This final stage continued until theoretical saturation has occurred when newly gathered findings replicated earlier discoveries during the observation process. Announced informal observations were completed on each participant during this study. I used an observation rubric that directly aligned with the ten Georgia teacher performance standards (Georgia Department of Education, 2013). See Appendix F for the rubric based tool used for the teacher observations. Teachers rated at the exemplary level continually sought ways to serve as role models and were teacher leaders. The proficient level was the expected level of performance for all teachers**.** The classroom observations were pre-arranged with the teacher participants and were conducted at the four middle school research sites. The duration for each classroom observation was approximately 30 minutes.

Data Analysis

Creswell (2013) defined data analysis as the process of data collection, the organization of data, conducting preliminary readings of the database, coding and finding themes, representation of the data, and the creation of a final report that interpreted the data. Yin (2014) suggested the best preparation for a case study was to have a general analytic strategy. The purpose of having an analytic strategy was to link the case study data with concepts of interest, which in turn the concepts would provide a sense of direction for analyzing the data.

Yin (2014) proposed using one of the following four data analysis strategies for the case study: (a) rely on theoretical propositions, (b) work from the ground up, (c) develop a case description, and (d) examined plausible and rival explanations. In my data analysis I implemented the strategy of relying on theoretical propositions (Creswell, 2013).

Yin (2014) described relying on theoretical propositions data analysis strategy as the original propositions that reflected in the research questions, review of the literature, and new propositions. These propositions shaped the data collection process and guided the analytic priorities. The individual and focus group interviews were professionally transcribed. I read the transcripts and interview responses to the research questions several times to immerse myself in the research. I used the cross-synthisis method to analyze the data as suggested by Yin.

I created tables for each research question and coded the individual and focus group responses. I also coded the classroom observations into tables in response to the research questions. In response to each research question, several themes developed.

Individual Interviews

The individual responses to the semi-structured individual interview questions were audio taped and professionally transcribed. Yin (2014), suggested that the teacher responses for each

interview question could be recorded in a word table in response to each research question. The creation of the word table for the teacher responses to the individual interviews allowed the data to be displayed and was used to inform categories. Such an array permitted the analysis to probe similarities in teacher participant responses.

Focus Group Interviews

The responses to the focus group interviews were audio recorded and professionally transcribed. The teacher participant responses to each research question was recorded in a word table. The word table displayed the data recorded with clarity and was used to inform categories.

Observations

Field notes were taken during the classroom observations. A rubric based on the ten Georgia teacher performance standards was used to collect data in regard to the five research questions. A word table was created to display the data observed in the classroom observations. A table was created to represent the data collected in the one-to-one interviews, focus group interviews and the classroom observations in response to each research question. The number of response and observation occurrences led to several themes in response to each research question. The data analysis was later prepared in a narrative format and in Tables 2-6.

Trustworthiness

Lincoln and Guba (1985) suggested trustworthiness was established with the following four factors: credibility, transferability, dependability, and confirmability. Trustworthiness was paramount for this qualitative research study. In order to maintain trustworthiness, I ensured credibility, dependability, transferability and confirmability by gathering rich data and carefully analyzed the data.

Credibility

Credibility referred to truth of the data or the participant's views and the interpretation and representation of them by the researcher (Cope, 2014). To support credibility, when reporting a qualitative study, the researcher should demonstrate methods of observations and audit trails. Member checking is a process whereby participants have an opportunity to review a draft of the manuscript to confirm accurate representation of participant responses and observations (Stake, 1995). In order to establish credibility, member checking will be implemented prior to the submission of the manuscript to the publisher. Member checking will allow the participants to clarify their responses and to make sure that their intentions were accurately recorded.

Dependability

Dependability refers to the constancy of the data over similar conditions (Polit & Beck, 2012). Dependability can be achieved when another researcher agreed with the decisions at each state of the research. A study is deemed dependable if the study findings are replicated using similar participants and similar conditions (Koch, 2006).

Transferability

Transferability referred to findings that can be applied to other settings or groups (Polit & Beck, 2012). A researcher can achieve transferability if the result of the study have meaning to other individuals not involved in the study and readers can associate the findings of the study to their own experiences (Cope, 2014).

Confirmability

Confirmability referred to findings that can be applied to other settings or groups (Polit & Beck, 2012). The researcher can achieve confirmability by describing how conclusions and

interpretations were established and that the findings were directly derived from the data. This can be achieved by providing rich quotes from participants that depict emerging themes (Cope, 2014).

I achieved credibility and dependability by gathering rich data and conducting extensive data analysis. Charmaz (2006) described rich data as solid material to be used for significant analysis. The rich data revealed the participant's views and perceptions. With the individual interviews, focus groups and classroom observations, I collected rich data. I have created a full and detailed account to allow the reader to compare the transferability to their own experiences.

Additionally, to ensure trustworthiness through the lens of credibility, dependability, and transferability, I employed triangulation of rich data, peer reviewed and member checking to ensure internal validity of the study. Gall et al. (2006) defined triangulation as the use of multiple data collection methods, analysis, data sources, or theories that provided the evidence for the validity and consistency of qualitative research findings. In qualitative research, the process of having the research participants judge the researcher's findings for accuracy and completeness was known as member checking. Member checking involved soliciting the participants' views of the study findings (Lincoln & Guba, 1985). Gall et al. (2006) included the process of correction of factual errors, collection of more data to reconcile discrepancies, and rewriting the report as part of the member checking process. To ensure the accuracy and completeness of the individual interview, the focus group interview, and the classroom observations, I will provided the participants with transcriptions of the interviews as well as the observation notes for review.

Peer review was used to provide an internal check of the credibility of my research process. Merriam (2009) defined peer review as having a professional colleague provide feedback throughout the analysis stage to assist in reviewing the data of the study.

Summary

The purpose of this qualitative case study was to explore the perceptions, thoughts, and feeling so 15 middle school teachers on the influence of effective teachers on student achievement. Five research questions guided the research design. A purposive sampling was used to select the teacher participants for this study. All 15 teacher participants had a mean student growth model score of 65% or higher as reported by the Georgia Department of Education State Longitudinal Data System (Georgia Department of Education, 2014). Teachers with a mean score of 65% or higher were rated at the highest level which was represented as level IV. The research was conducted at four middle schools. Data was collected through semi-structured individual interviews, semi-structured focus group interviews, and classroom observations. The one-to-one interviews and the focus group interviews were conducted with the use of semi-structured interview questions. The individual interviews and focus group interviews were audio recorded and professionally transcribed. An observation rubric and field notes were used for the classroom observations. My data analysis was built on the theoretical framework of John Dewey and Jean Piaget's theory of Constructivism (Schoen, 2008). I implemented the strategy of relying on theoretical propositions. These propositions shaped the data collection process and guided the analytic priorities.

I read the individual interview transcripts and the focus group transcripts several times to immerse myself in the details and to get a sense of the whole before breaking in down into units. I used memos during the field stage and in the analysis stage. These memos contained hints, clues and suggestions that were used in the preliminary sets of interpretation. The responses from the individual interviews, the focus group interviews, and classroom observations were categorized and coded using the cross-case synthesis analytic technique. Themes also called

categories which are broad units of the information that consist of codes were aggregated to create a common idea (Creswell, 2013). The final step of the data analysis involved interpretation of the data. The data was represented in narrative form and with tables.

CHAPTER FOUR: FINDINGS

Overview

The findings in this chapter were based on the analysis of the data collected from one-to-one semi-structured interviews, focus group semi-structured interviews, and classroom observations. The one-to-one interviews and the focus group interviews were professionally transcribed. The transcripts from the individual interviews and the focus group interviews were read several times to immerse myself into the research.

Reich (2007) explained the Theory of Interactive Constructivism was built on the earlier efforts of both psychologist and educators. Using the Theory of Interactive Constructivism, In my data analysis I implemented the strategy of relying on theoretical propositions as described by Creswell (2013) in the grounded theory . These propositions shaped the data collection process and guided the analytic priorities. The process of data collection, data analysis, and report writing was interrelated and occurred throughout the process of the research study. Yin (2014) suggested the use of memos during the field stage and in the analysis stage. These memos contained hints, clues, and suggestions that were used in the preliminary sets of interpretation. The next data analysis step involved categorizing and coding the data. Themes also called categories, which are broad units of the information that consist of codes, were aggregated to create a common idea (Creswell, 2013). The final step involved interpretation of the data. Lincoln and Guba (1985) described the interpretation process as making sense of the data in lessons learned. Finally, I created an in-depth picture of the cases using narrative and tables. As a precaution to protect the identity of the 15 teacher participants as well as the research sites, pseudonyms were assigned. The major sections of chapter four include the following: (a) Overview, (b) participants, (c) results, (d) research questions responses, and (e) summary.

Participants

I asked the principals at the four middle school site locations to provide a list of teachers

that met the criteria of having a level IV overall mean student growth model score of 65% or

higher as reported in the State Longitudinal System at least one time in the past three years

(Woods, 2018). All 15 participants had a level IV mean student growth model score reported at

least one time in the past three years in the State Longitudinal Data System. All 15 teacher

participants willingly signed a consent form to participate in the study prior to the investigative

research. See Appendix C for the teacher participant consent form.

The demographics of the 15 teacher participants included 12 female and 3 male middle

school teachers. The number of years of teaching experience varied from four years to thirty

years. Most of the teacher participants were gifted certified. As shown in Table 1, the

demographics of the teacher participants are represented.

Table 1

Participant Demographics

Teacher Participant	Gender	Years of Teaching Experience in GA	Gifted Certified
Ashley	Female	15	Yes
Jane	Female	17	Yes
Sally	Female	23	Yes
Maria	Female	28	Yes
Debra	Female	10	Yes
Kyle	Male	20	No
Amy	Female	18	Yes
Diane	Female	16	Yes
Joan	Female	10	No
Cathy	Female	5	No
Erin	Female	10	Yes
Michael	Male	15	Yes
Nancy	Female	20	Yes
Donna	Female	30	Yes
Craig	Male	4	Yes

The following 15 teachers served as participants in the study:

Ashley

Ashley was a white female with 15 years of teaching experience at the middle school level in Georgia. Ashley taught on-level and gifted Language Arts classes. Ashley's passion for teaching was evident in the one-to-one interview, focus group interview, and in her classroom observation. Ashley's disposition when she responded to the interview questions was animated, enthusiastic, and reflective. In the one-to-one interview, Ashley indicated that she was a reflective teacher and engineered a purposeful plan of action for student success. Ashley's goal was to create an active-learning environment whereby a student led-learning environment was the norm. During the classroom observation, Ashley's students were responsible for housekeeping roles such as attendance manager, table manager, notebook manager, and folder manager. Ashley shared in her one-to-one interview that she created multiple opportunities for student-choice. During the focus group interview, Ashley stated that her students had choice in the books that they read, and her students were able to choose their research topics. At the beginning of the classroom observation, students were given the opportunity to self-select their activator, which was referred to as "free choice Friday." In the one-to-one interview, Ashley noted that when students were provided choice it yielded a great product. The classroom observation highlighted Ashley's strength in her purposeful selection of instructional strategies to foster a positive learning environment. Ashley designed a reward system for each class to earn positive points. Ashley's students garnered points collectively for a variety of reasons such as attendance, homework completion, and student achievement. Ashley stated in the one-to-one interview that points earned as a class rather than as an individual student built a sense of

belonging and community. During the classroom observation, Ashley kept a running class period tally on the board to create a friendly competition between her classes.

Jane

Jane was a white female with 17 years of teaching experience at the middle school level in Georgia. Jane has taught on-level, co-taught, and gifted Life Science classes. In Jane's one-to-one interview, she stated that she preferred to teach students in the gifted advanced content classes since gifted students already had a strong background in science. Jane stated in her one-to-one interview, that she took pride in creating a rigorous classroom environment. Jane mentioned in the one-to-one interview, "I feel like my class is really hard for the AC kids. I do not know if I made it easy enough for my on-level students. My class is very rigorous. I think that is good for the highest kids. I need to do some soul searching for my on-levels." Jane indicated in the one-to-one interview, that she taught to the top 35% to 40% of the class. Jane shared in the one-to-one interview that she reached higher levels of learning with specific questioning techniques. Jane stated in the one-to-one interview, that she had mastered the use of wait time. Jane shared that she used formative assessments to drive instructional decision-making. Jane mentioned that she used assessment strategies such as thumbs up and thumbs down to check for understanding. Jane also stated in the one-to-one interview, that she had high standards for behavior. Jane shared the following: "When they come in, they think I'm such a nice, wonderful, and sweet teacher and then they realize as long as she's talking I can't talk and if she calls on someone then I can't talk over that person because I need to hear it." In the focus group interview, Jane shared that she dressed in costume to increase student engagement. Jane stated that she dressed as Gregor Mendel's great niece.

Sally

Sally was a white female with 23 years of teaching experience at the middle school level in Georgia. Sally taught on-level, and gifted Social Studies and Reading classes. Sally stated in the one-to-one interview, that she listened to the music that the students preferred, and she read the books that the students read. Sally stated in the one-to-one interview, that she was purposeful in creating an environment that respected individual student differences, ability, interests, and culture. Sally indicated in her one-to-one interview, "I'm a very strong believer in the importance of classroom culture. It is important to find something that you can affirm all the students, whether it is their sense of humor or athletic ability. I try to find positive traits to reinforce in the classroom." Sally stated in the one-to-one interview, that she valued collaboration with her peers to create engaging lesson plans. Sally noted that her use of technology was not an area of strength. Sally shared in her one-to-one interview that she fostered higher-order thinking skills, with the Socratic Seminar instructional method. During Sally's one-to-one interview, she indicated that that students tend to do better work when they are grouped with people they like. During the focus group interview, Sally stated "You'll be surprised at how some students will actually be willing to work with a difficult student and end up bringing out the best in that student." During the classroom observation, it was evident that Sally was purposeful in the physical arrangement of the classroom to create a positive learning environment. For example, Sally used lamps for lighting instead of the overhead lighting. In addition, Sally played music as students entered the room and while the students worked on their warmup to set the tone for a quiet learning environment.

Maria

Maria was a white female with 28 years of teacher experience at the middle school level in Georgia. Maria taught on-level and gifted Social Studies classes. Maria was the gifted coordinator for her school and was asked by the school district to pilot a gifted resource class. Maria designed her lesson plans to challenge her gifted students. During the classroom observation, it was noted that Maria's learning activities required the students to use convergent thinking, divergent thinking, and problem-solving skills. In the one-to-one interview, Maria indicated that the students participated in Genius Hour, which was a student-centered learning activity. During the classroom observation, Maria's gifted students participated in an ethnography unit, which involved the use of a Likert scale, survey, and interview. Maria prepared a brainteaser for the daily warmup. The brainteaser challenged the students to reach higher levels of learning, such as reasoning, and analyzing. During the focus group interview, Maria stated that she created problem-based learning activities so that the students could reach the synthesis level of Bloom's Taxonomy. During the classroom observation, it was evident that Maria was clearly in command of the class as the classroom procedures were well rehearsed. Maria maintained a friendly and professional disposition while working with her students. In addition, Maria treated the students fairly and modeled classroom expectations. Maria's classroom management skills were well refined, which maximized instructional time.

Debra

Debra was a white female with 10 years of teaching experience at the middle school level in Georgia. Debra taught on-level and gifted Earth Science. In the focus group interview, Debra stated that she greeted the students at the door, gave high fives, and hugs as needed to promote a warm and caring learning environment. Debra stated that the students needed to feel connected.

During the classroom observation, the classroom resembled a student-led learning environment with hands on learning stations. It was also noted that Debra was purposeful in selecting learning activities that allowed for student movement. During the classroom observation, Debra implemented a human barometer activity to gauge student understanding of a learning concept. During the one-to-one interview, Debra shared that she purposefully designed lessons to incorporate the use of technology. Debra mentioned that she used a variety of computer programs such as USA Testprep and Educational Game Zone. Debra noted in the one-to-one interview that she used web quests as an instructional activity to promote higher levels of learning. During the focus group interview, Debra mentioned that she taught her students how to use the scientific method to solve real world problems.

Kyle

Kyle was a white male with 20 years of teaching experience at the middle school level in Georgia. Kyle taught on-level and co-taught Earth Science. During the one-to-one interview, Kyle stated that he purposefully designed learning activities that included movement. Kyle mentioned that he had purposefully implemented scavenger hunts and used dance motions paired with vocabulary words to increase student movement. Kyle was a proponent of the active learning classroom. During the classroom observation, Kyle allowed students to take a turn to throw a basketball into one of the four basketball hoops mounted in the classroom. Students volunteered to answer questions and were provided the opportunity to take a shot at sinking the basketball into the basketball hoop if they answered the question correctly. Most of the students eagerly volunteered to answer Kyle's questions. During the focus group interview, Kyle mentioned that he provided positive student recognition on just about anything. During the one-to-one interview, Kyle shared that he purposefully named two-star students per class period each

Friday. Kyle stated that he made eight positive parent contacts each Friday to enhance his positive learning environment. Kyle mentioned in his one-to-one interview that every Friday he dressed in a wig and costume to entertain his students with a rendition of a popular tune with lyrics that included science vocabulary from the previous week. During the classroom observation, Kyle was dressed in costume and performed the Friday song to the amazement of his students. The students were eagerly engaged and sang along with Friday science vocabulary song.

Amy

Amy was a white female with 18 years of teaching experience at the middle school level in Georgia. Amy mainly taught gifted Math classes. During the one-to-one interview, Amy shared that she purposefully integrated the use of technology into her lesson plan. During the one-to-one interview, Amy indicated that she used the Smart Board and web sites, such as Learn Zillion. Amy also mentioned that she implemented flexible grouping practices daily. Amy stated that she used the results of assessment data to make instructional decisions. Amy added areas of weakness were addressed in the daily warmups. During the classroom observation, it was evident that Amy designed her lesson plans based on the Georgia Performance Standards. Amy implemented a "Throw Back Thursday" Georgia Milestones review activity. The performance standards were identified next to each question on the activity grade sheet. Students peer assessed the learning activity and recorded the grade earned on the grade sheet.

Diane

Diane was a white female with 16 years of teaching experience at the middle school level in Georgia. Diane taught gifted and on-level Earth Science. During the one-to-one interview, Diane stated that she purposefully built positive relationships to make the students feel

comfortable. Diane stated, "When a student feels comfortable with their teacher, they are comfortable making mistakes." Diane used a variety of technology applications to reach higher levels of learning. Diane stated in the one-to-one interview that she used simulations, such as Ted Talks and Phet, to increase rigor. Diane indicated that she also used her Smart Board, Edmodo and video clips daily. During the one-to-one interview, Diane mentioned that she used problem-based learning to increase student engagement. Diane stated that problem-based learning activities provided students with relevancy and increased student engagement. Diane indicated in the one-to-one interview that she intentionally used music to set the stage for the students. During the classroom observation, Diane played music as students entered the room and she used music as a timer to increase teacher wait time. Diane implemented a peer evaluation activity during the classroom observation, whereby students assessed student work that was posted in the hallway using the gallery walk technique. Students were required to provide one praise and to provide one suggestion for improvement for each peer evaluation.

Joan

Joan was a white female with 10 years of teaching experience at the middle school level in Georgia. Joan taught on-level, and co-taught Language Arts and Social Studies. Joan stated in the one-to-one interview, that she was a lifelong learner and continued her professional development to increase teacher effectiveness. Joan stated that the *Teach Like a Pirate* and *Play Like a Pirate* books by Dave Burgess provided the inspiration to create a pirate theme classroom. The classroom observation provided the opportunity to view the pirate theme artifacts. An enormous pirate ship made from poster board was mounted on the classroom wall. The classroom was decorated with palm trees, a parrot, seashells, a pirate hat, and a wooden plank. During the one-to-one interview, Joan indicated that at the beginning of the school year, the

students walked the plank to get them to buy into the pirate theme and to increase student engagement. Joan mentioned, "Students earned opportunities to wear the pirate hat and students were given the opportunity to designate a pirate name such as Captain Goodbody." Joan used music to engage the learners. In the one-to-one interview, Joan mentioned that she rewrote the lyrics to songs such as "Let it Go" from the movie *Frozen* to enable the students to learn the three reasons why James Oglethorpe settled in Georgia. Joan added that she dressed in a costume to represent James Oglethorpe. Joan mentioned that she was influenced by ideas that she gleaned from www.teacherspayteachers.com and a booked entitled *Grading Smarter Not Harder: Assessment Strategies that Motivate and Help Them Learn* by Myron Dueck. During the focus group interview, Joan shared that she built relationships with the students to let them know that she cared about them. Joan also stated if students do not have support at home, the students have to have a cheerleader at school. Joan indicated if students feel supported by their teacher, the students would work harder to impress the teacher and rise to the challenge.

Cathy

Cathy was a white female with five years of teaching experience at the middle school level in Georgia. Cathy taught on-level and co-taught Science. In the one-to-one interview, Cathy mentioned that she purposefully implemented real-world learning activities to increase student engagement. Cathy indicated that she used role-playing as a learning strategy to increase student engagement. Cathy mentioned that during the rocket unit, students-built prototypes of rockets and that she served as the NASA coordinator. Cathy stated, "They get to do hands on stuff every single day and they love it. It doesn't feel like school to them." In the focus group interview, Cathy stated that she tried to do a lab at least once a week to add relevancy. Cathy indicated that the students raced cars and solved problems for volume and mass. In the one-to-one interview,

Cathy stated that she used web quests to teach higher order thinking skills. Cathy also shared that she used the results of formative assessments to guide flexible grouping decision-making.

Erin

Erin was a white female with 10 years of teaching experience at the middle school level in Georgia. Erin taught both Math and Science. During the one-to-one interview, Erin shared that she used real-world connections to add relevancy to the curriculum. For example, Erin shared stories about her horse and the barn. Erin stated that she posed real-world problems for students to solve, such as how much will it cost to fence in an area or how much will it cost per hour. Erin indicated that this would help students arrive at higher-order thinking levels. In the one-to-one interview, Erin indicated that she used hooks to increase student engagement and for problem-solving. Erin posed problems and allowed wait time for her students to mull it over. Erin added that she used guided questions to help her students through the problem-solving activity. During the classroom observation, Erin shared stories about her horse and posted photographs of her daughter and the horse throughout the classroom. Erin used facial expressions and a variety of unique vocalizations to make the learning enjoyable. It was evident that the students enjoyed the learning environment as student laughter was noted.

Michael

Michael was a white male teacher with 15 years of teaching experience at the middle school level in Georgia. Michael taught gifted Social Studies. Michael served as the gifted coordinator at his middle school. During the observation, it was noted that Michael dressed professionally wearing a coat and tie. During the classroom observation, Michael maintained a courteous tone and used a formal register with the students. During a simulation, Michael used a salad plate and hammer to represent the break up the Ottoman Empire. Michael posed purposeful

questions and used teacher wait time. As Michael walked around the classroom, the students

would turn to follow his movement. The pacing of the lesson was deliberate, which increased

student engagement. During the one-to-one interview, Michael explained that he used the

following strategy to communicate high expectations: names were posted on the wall under the

A List Celebrities sign for anyone who earned an A on a unit test. Michael also shared that

students with perfect scores on unit tests were exempt from completing a study guide on the next

unit test. Michael awarded students with candy for A grades on unit tests. As Michael returned

test results to the A students, they received a round of applause. Students who earned an A on a

unit test could ring the gong in the classroom. During the focus group interview, Michael stated

the importance of celebrating high student achievement.

Nancy

Nancy was a white female with 20 years teaching experience at the elementary level,

middle school level, and in special education in Georgia. Nancy taught advanced content, on-

level, and Language Arts. In the one-to-one interview, Nancy indicated that she planned for a

learner-centered environment and provided the students with menu choices. In the one-to-one

interview, Nancy indicated that she used technology applications, such as the Smart Board and

Powtoon, to increase student engagement. Nancy mentioned that she incorporated purposeful

questioning techniques. Nancy stated, "I have to give them ample time to think about the

question. I adjust my question if they are not responding." During the classroom observation, it

was evident that Nancy valued the student voice. As students responded to teacher questions,

Nancy would respond, "I love that." Nancy had a bulletin board in her classroom that celebrated

exemplary student work. Student work was proudly displayed under the title, "Rock Star

Worthy". During the focus group interview, Nancy stressed the importance of movement. Nancy

indicated that she encouraged movement in the classroom by having the students stand up, clap, and play basketball.

Donna

Donna was a white female with 30 years of experience teaching at the middle school level in Georgia. Donna served as the gifted coordinator for her middle school. In Donna's spare time, she taught the Gifted Endorsement class for the school district. Donna mainly taught advanced content Social Studies and Reading classes. In the classroom observation, the physical arrangement of the class was warm and inviting. Donna used lamps for lighting and background music to greet the students. Donna had a bistro style table and chairs for student used during silent reading. During the one-to-one interview, Donna shared that she purposefully differentiated instruction using the following techniques: (a) Tiered-lessons, (b) tiered-questioning, and (c) tiered-graphic organizers. To create a student-centered learning environment, Donna shared in the one-to-one interview that she designed the following activities to increase engagement: (a) Problem-based learning, (b) product-based learning, (c) role-playing, and (d) simulations. Donna stated in the one-to-one interview that she loved using technology. Donna mentioned that she incorporated the use of the following technology applications: (a) QR code scavenger hunts, (b) Kahoot, (c) eMaze, (d) i-Movie, (e) Crowd Up, (f) Padlet, and (g) Edmodo. Donna stated in the focus group interview that technology improved the delivery of instruction. Donna stated, "Instead of dumping and pouring information, we are now focused on critical thinking."

Craig

Craig was a white male with five years teaching experience at the middle school level in Georgia. Craig taught gifted, on-level, and Social Studies. During the one-to-one interview,

Craig shared that he used simulations to increase student engagement. During the classroom

observation, Craig introduced the breakup of the Ottoman Empire as a metaphor. A hammer

represented France and Great Britain, and the salad plate represented the Ottoman Empire. Craig

mentioned in the one-to-one interview that he wore costumes to increase student engagement.

Craig stated in the focus group interview, that he designed a bead simulation to create jewelry

based on economic systems. In the one-to-one interview, Craig mentioned that he embraced the

use of technology. Craig stated that he used Google Classroom, Go Animate, and Google

Calendar. Craig also mentioned in his one-to-one interview that he purposefully grouped the

students based on the Georgia Milestones scores from the previous school year.

Results

The results of this qualitative case study on the influence of effective teachers on student

achievement is reflected in the theme development section. The theme development is reported

in narrative, which includes participant quotes. Codes were developed from the one-to-one

interview responses, the focus group interview responses, and the classroom observations. The

codes are represented in Tables 2 through 6. The codes led to the development of themes in

response to each research question.

Theme Development

My data analysis was built on the theoretical framework of Constructivism (Hyslop-

Margison & Strobel, 2008). I implemented the strategy of relying on theoretical propositions.

Yin (2014) described relying on theoretical propositions data analysis strategy as the original

propositions that reflected in the research questions, review of the literature, and new

propositions. These propositions shaped the data collection process and guided the analytic

priorities. With the individual interviews, classroom observations, and focus group interviews, I collected data on teacher effectiveness.

I read the individual transcripts and the focus group transcripts several times to immerse myself in the details, and to get a sense of the whole before breaking in down into smaller units (Creswell, 2013). Yin (2014) suggested writing memos during the field stage and in the analysis stage. The memos that I collected throughout the study contained hints, clues, and suggestions that were used in the preliminary sets of interpretation. I coded and categorized the data that I collected. The next step involved interpretation of the data. Lincoln and Guba (1985) described the interpretation process as making sense of the data in lessons learned. The final stage of the analysis and interpretation of the data led to emerging themes. In the end, I described an in-depth picture of the case study, and used narrative and tables in response to each research question.

Research question 1: "How do effective teachers implement professional knowledge and instructional planning to influence student achievement?"

An open coding technique was used to categorize the one-to-one interview responses, the focus group interview responses, and the classroom observation results in response to research question 1. The research evidence was collected, recorded, coded, and analyzed during the research study. In response to research question 1, the following themes developed: (a) Real-world learning, (b) collaboration, (c) understands the needs of the gifted student, and (d) student-choice. As shown in Table 2, the responses are represented from the interview and observation results regarding research question number 1.

Real-world learning, collaboration, and student-choice resulted in the top three responses to research question number 1 from the one-to-one teacher interview. During the one-to-one interviews, the teacher participants stressed the importance of creating real-world learning

opportunities for their students. Maria mentioned in her one-to-one interview that she links the curriculum to current events to make the learning relevant. Amy stated, "It is easy to make real-world connections in the geometry unit as everything that is built is based on triangles. Michael indicated that he used technology to increase relevancy and make real-world learning connections. Michael stated, "I try to engage the students on their playing field. This is the You Tube generation. We try to do a lot of stuff with having the students creating videos."

The teacher participants in this study also noted the importance of collaboration with teachers in their professional learning community. In most cases, teacher participants mentioned that they collaborated daily with members of their professional learning community to compare notes on the pacing of lessons and student progress toward mastery of the standards. The teacher participants underscored the importance of student-choice during the one-to-one interviews and purposefully created opportunities for student-choice. Ten out of fifteen teacher participants shared in the one-to-one interviews that they created a learner-centered classroom that allowed for as many opportunities of student-choice. Ashley stated, "for my reading performance tasks, they have ten different choices. They can make a soundtrack, they can write a song, they can make a game board, they can make a movie poster, and they can create a popup book, a movie, or movie trailer for the book. They can do an advertising campaign for their book and they can also come up with their own product." Maria mentioned that she gave the students choices for most of the activities in her classroom. Maria stated, "The kids can choose different end products and they feel more in control that way and more invested when they get to choose their end product." Erin stated that student-choice increased student buy-in. Donna stated in the one-to-one interview, that she is creative with student-choice and allowed her students to determine the date for their project deadlines. Donna reported, "I'll give the students parameters and I'll say pick a

due date. If you need to change the due date, just like a contract, you have to negotiate that, and I have to have that in writing." Craig mentioned in the one-to-one interview, that he provided the students with a variety of note taking strategies based on the needs of each student. During the one-to-one interview, Ashley mentioned that she gave the students as much choice as possible. Ashley mentioned that the students were able to select the books they read and were able to choose their own research topics. Ashley added, "I feel like that alone gets them more engaged and gets them buying into whatever the task might be."

The top three responses for research question number one from the focus group interviews included the following: (a) Encourage student questions, (b) problem-based learning, and (c) choice in novels. During the focus group interviews, the teacher participants in this study mentioned how they encouraged students to ask questions. The teacher participants shared when students are encouraged to ask questions, the students feel more comfortable taking academic risks. Most of the teacher participants valued the importance of problem-based learning to increase relevancy for the students. Cathy shared in the focus group interview, that she incorporates a lab at least one time a week to make the learning relevant. She added, "We race cars and have the students find the mass and volume." Michael shared, in the focus group interview that he incorporates technology   to give the students another reason to be engaged with our curriculum. Michael added, "We will give them assignments that involve creating a video or creating a webpage, which gives them a creative component where they feel like they own something." Debra mentioned, that she used problem-based learning to relate to the real-world and to push the students to higher levels of thinking.

Learning, understanding the needs of gifted students, and interdisciplinary connections represented the top three observations recorded during the classroom observation portion of the

study in response to research question number one. During the observation portion of the study,

students were observed actively learning. The teacher participants in this study designed active

learning strategies to increase the mastery of the standards. Most of the teacher participants were

gifted certified in their subject area and planned activities to promote learning for the gifted

learner. During the classroom observations, several teacher participants differentiated the lessons

for the gifted learner with tiered-questions, tiered-learning activities, and tiered-graphic

organizers. Many teacher participants created lessons that involved interdisciplinary units. At

one of the research sites, Science and English classes were combined on a weekly basis to

promote interdisciplinary connections. During the classroom observation, Maria's students

participated in a real-world learning activity. The students planned an ethnography unit, which

included the use of a Likert scale, survey, and interview. During Joan's classroom observation,

the students were provided the opportunity to choose from a variety of writing topics.

Research question 2 "How do effective teachers implement differentiation and instructional

strategies to influence student achievement?"

I used extensive open coding to categorize and analyze the one-to-one interview

responses, the focus group responses, and the classroom observation results for research question

2. In response to research question 2, the following themes developed: (a) Grouping, (b) student-

choice, (c) learning styles, and (d) rubrics. As shown in Table 3, the interview responses and

observation results are represented about research question 2.

Student-choice, wait time, and formative assessments represented the top three responses

to research question number two from the one-to-one interviews. During the one-to-one

interview, Diane stated, "that she used the results of diagnostic testing to determine re-teaching

needs. Erin shared in the one-to-one interview, that she used the pre-test data to design activities

for remediation. Erin indicated she would give her students a week to complete the remediation activities on their own outside of class. Michael mentioned, how he differentiated instruction based on the results of diagnostic data. Michael stated, "For the most part it is how much attention that the students are going to get. The diagnostic data tells us some students get to skip this part, while some students are going to do the regular kind of activity, and some of the students might have to do a little bit extra." Craig mentioned that he provided his students with a pre-quiz. Craig stated, "The students who performed lower on the pre-quiz get a different set of pages from the students who performed higher for their interactive notebook. By the time they take the quiz, we hope they have reached the level they need." Ashley stated most of the grammar assignments are tiered at the low, average, and high levels. Debra mentioned that she addressed remediation skills during the warmup lesson. Amy mentioned that she assigned students to groups to solve different problems as a differentiation technique. Amy stated, "I'll make sure the more advanced students get the tougher questions." Cathy stated that she collaborated with her special education co-teacher to design activities that were easier for the struggling students. Erin mentioned that she assigned different homework questions as a differentiation measure. Donna stated how she implemented tiered-assignments, tiered-questioning, and provided her students with a variety of graphic organizers. Craig shared the following differentiated instructional strategies that he has implemented in his classroom: (a) Note taking, (b) video clips, (c) leveled readings, and (d) written responses.

Grouping, rubrics, and bring you own device (BYOD) represented the top three responses for research question number two from the focus group interviews. During the focus group interview, Ashley mentioned that she used the results of data to create tiered-assignments and pullout groups. Kyle mentioned during the focus group interview, 80 grade level students

were divided into three classes, which represented high, medium, and low groups, based on the results of formative assessments. During the focus group interview, Ashley stated how rubrics were used as a checklist. Ashley shared, "I teach them to go through the rubric and underline the verbs and circle the nouns, and then go through their product step by step." Sally mentioned how her students felt secure and safer with the use of a rubric since they know clearly, what is expected in terms of their own product.

Student grouping, learning styles, and student ability represented the top three observations in response to research question number two from the classroom observation portion of the study. During the classroom observations, six out of fifteen teacher participants implemented differentiated grouping practices based on the results of assessment data. Six out of fifteen teacher participants implemented flexible grouping practices based on the results of assessment data during the classroom observation. During Sally's classroom observation, her students were grouped together for a problem-based learning activity. Maria's students were grouped based on assessment data to solve the brainteaser question. During Joan's classroom observation, she used the results of the assessment data to determine student groups.

Research question 3 "How do effective teachers implement and use assessment strategies to increase student achievement?"

Extensive open coding was implemented to categorize the one-to-one interview responses, the focus group responses, and the classroom observation results for research question 3. In response to research question 3, the following themes developed: (a) Formative assessments, (b) informs future instruction, (c) check for understanding, and (d) data-driven decision making. As shown in Table 4, the interview responses and observation results are represented regarding research question number 3.

Formative assessments, diagnostic data, and feedback represented the top three responses to research question number three from the one-to-one interviews. During the one-to-one interview, Ashley, Kyle, and Michael mentioned the use of the exit ticket instructional strategy as a formative measure to determine mastery of the standards. Results of the Exit Ticket were used to design the warmup for the next day. Nancy mentioned, "I use student held white boards as an informative measure to determine mastery of the standards." Ashley stated, "I use a student portfolio method as a formative measure to determine student mastery of the standards and to inform her instructional decision-making." Maria stated, "The use of formative assessments helps me guide my teaching as far as what needs to be clarified, re-taught, and reinforced." Many teacher participants mentioned the importance of grading activities and assessments in a timely manner to provide students with feedback. Maria stated, "I always grade homework and classwork to provide feedback to her students." Amy stated that she gave her students instant feedback on their math homework. Diane mentioned, I assign USA Test Prep as homework. Diane also stated that USA Test Prep provided the students with immediate feedback on mastery of the standards.

Provide feedback, inform future instruction, and weakness identification represented the top three coded responses for research question number three from the focus group interviews. Many of the teacher participants strived to provide their students with feedback in a timely manner. Most of the teacher participants used data points, such as formative assessments to make instructional decisions based on the needs of the students. Ashley stated, "It is hard to provide written feedback to my students in a timely manner." Maria mentioned, "I use a quick method of check, check plus or check minus as a system to provide constructive feedback to her students on their progress toward mastery of the standards." Debra mentioned how she used a portfolio

system to provide feedback to her students. Joan stated, written feedback was provided on homework.

Check for understanding, data-driven decision-making, and monitor mastery of the standards represented the top three observations in response to research question number three made during the classroom observation portion of the research study. During the classroom observations, seven teacher participants implemented a strategy to check for understanding. During Jane's classroom observation, she used the thumbs up and thumbs down strategy to check for understanding. During Debra's classroom observation, she incorporated movement and used the human barometer activity to check for understanding. Students had to stand under a yes, no, or maybe sign located in the classroom that indicated how well they understood the lesson. During Joan's classroom observation, she circulated throughout the classroom to check for understanding. Kyle checked for understanding with teacher directed questioning.

Teacher participants also checked for understanding during the classroom observation by asking students questions. During the classroom observation portion of the research study, many of the teacher participants monitored student progress throughout the lesson with techniques, such as thumb up and thumbs down. The teacher participants in this study were able to collect data throughout the lesson to monitor student progress. The teacher participants in this study were observed monitoring student progress continuously.

Research Question 4 "How do effective teachers create a positive and academically challenging environment to influence student achievement?"

Open coding was implemented to analyze the interview responses and the classroom observations in response to research question 4. The following themes were developed in response to research question 4: (a) Models respect, (b) warmups, (c) high expectations and (d)

values student-voice. As shown in Table 5, the interview responses and observation results are represented regarding research question 4.

Warmups, high expectations, and teacher costumes represented the top three teacher participant responses to research question number four in the one-to-one interview. Many teacher participants mentioned in the one-to-one interview that they used warmups to review the curriculum from the previous day to boost student confidence. Most of the 15 teacher participants mentioned that they held high expectations for all their students to master the Georgia Performance Standards for their subject area. Many teacher participants stated that they wore costumes to deliver the curriculum and to increase student engagement.

Having positive interactions, attending student activities outside of school, and listening to the student's music represented the top three responses to research question number four from the focus group interviews. During the focus group interview, Ashley mentioned that it first is important to establish a relationship with my students." Ashely added, "It's all about the relationships, if you don't have a relationship with those kids, they are not going to do their best." Diane mentioned, it is important to have a relationship with my students. Diane added, "When I went to college, we were taught how to hug our students. These kids need it. They are not being loved at home, as they use to be. If they know you care, they are going to like you and your class." Joan stated, that she uses every student's name in class. Joan added, "You don't know if they hear their name at home." Joan also added that she is a hugger and always offered high fives. Many teacher participants mentioned the importance of calling on the students by name to increase positive interactions. Debra stated, that it is important to greet the students at the door at the beginning of each class." Debra mentioned that she gave her students high fives and hugs as needed. Debra also added that she played music as students entered the classroom to

set a welcoming tone. Maria also shared the importance of positive interactions by greeting at the door as her students arrived for class. During the focus group interviews, many teacher participants noted the importance of attending student activities and performances outside of school and how much it meant to their students.

Models respect, values student-voice, and maintains pacing represented the top three observations recorded in response to research question number four. During Ashley's classroom observation, she modeled respect for the students by providing pillows for students to sit on the floor and the freedom to choose where they wanted to sit. During Joan's classroom observation, she modeled respect for the students with the careful appointment of Pirate artifacts throughout the classroom. The purposeful attention to detail within the physical environment as well as the welcoming teacher approach created a warm and positive learning environment, which modeled respect for the students. During Maria's classroom observation, she greeted the students by name at the door as they entered the classroom, which modeled respect for her students. Maria valued the student-voice as she listened intently to a student response and thanked the student for answering her question. Debra and Diane valued the student-voice as they listened to their students as they responded to questions. During Joan's classroom observation, she affirmed a student response by offering a round of applause." Debra and Diane were observed listening to their students as they responded to questions. Joan affirmed a student response by offering a round of applause.

Research question 5 "How do effective teachers communicate to influence student achievement?"

The research evidence was collected, recorded, coded, and analyzed. The following themes were developed in response to research question 5: (a) Shows joy for teaching, (b) call

parents, (c) warmup, and (d) nonverbal ques. As shown in Table 6, the interview responses and observation results are represented regarding research question 5.

Call parents, nonverbal ques and email represented the top three responses for research question number five from the one-to-one interviews. Six out of fifteen teacher participants mentioned that they preferred to call parents rather than send emails. For example, Maria stated, "I rarely have any negative interactions with parents because I usually call them and when they hear my voice, they know that I care and realize that I have their child's best interest." Kyle stated, "I call 140 parents during the first two weeks of school to make a positive first contact." Kyle added, "I call eight parents every Friday for the star student of the week award." Joan added, "The first contact is by phone so that you can develop a rapport with the parent." Three out of the fifteen teacher participants provided parents with a google cell number to increase communication. Michael stated, "I try to be as transparent as possible. I provide the parents and students with my google cell phone number. The cell phone number is on the syllabus." Craig shared, "I set up a Google Voice number." Craig also stated that he preferred phone calls over emails as emails could be misread. Debra stated, "At the open house, I give my parents a book mark that has my cell phone number, email and blog." Fourteen out of fifteen teacher participants indicated the use of verbal and nonverbal communication with their students. Sally, Maria, and Cathy stated that they use the nonverbal teacher face to communicate dissatisfaction with a student behavior. Diane mentioned, "I use a sticky note on a student desk as a nonverbal mode of communication. Michael shared, "Students have been trained to point to their nose if they need to get a tissue and hold up their pencil to get permission to sharpen their pencil." Seven out of fifteen teacher participants mentioned the use of email to communicate with parents. Amy stated that she preferred to email parents rather than call home. She shared, "No

one is ever there when I call." Nancy and Donna also mentioned that they used email to communicate with parents.

Warmup, high expectations, and teacher costumes represented the top three responses to research question number five from the focus group interviews. During the focus group interviews, many teacher participants mentioned the use warmups to communicate the learning target and expectations for mastery of the learning target. Many teacher participants mentioned that they communicated high academic expectations for their students. Michael shared, "I try to make as much information available up front as possible. My warmup, my lesson plan and homework are on my blog." Michael stated that the blog increases transparency and communicates high expectations to parents and students." Many teacher participants indicated the use of teacher costumes to communicate the curriculum to increase student engagement. Jane shared that she dressed up in costume as Gregor Mendel's great niece.

Shows joy for teaching, explains curriculum clearly and encourages questions represented the top three observations regarding research question number five. During the classroom observation, Ashley's joy for teaching was apparent in the interactions with the students. Ashley created a system for each class period to gain points collectively for positive student outcomes. Class period scores were tallied on the board daily and class periods competed against each other for the highest number of possible points. Michael succinctly delivered the curriculum with clarity. Michael purposefully paced the delivery of the instruction to communicate the curriculum. Most of the teacher participants allowed students to ask questions. Many teacher participants provided their students praise for asking questions.

Table 2

Frequency *of Codes Across Data Points*

Themes	Open Codes	Enumeration of Open Codes
Real-world learning, collaboration, learning and student-choice	**One to one interview responses**	
	Real-world learning	19
	Collaboration	15
	Student-choice	10
	Surveys	8
	Develop relationship	7
	Focus group interview responses	
	Encourage student questions	3
	Problem-based learning	3
	Choice in novels	2
	Collaboration	2
	Common Assessments	2
	Classroom observation results	
	Learning	13
	Understands needs of gifted students	8
	Interdisciplinary connections	7
	Knows learning abilities	7
	Understands cultural backgrounds	6
	Technology	5
	Student interests	5
	Understands needs of special education students	5
	Implements best pedagogy	4
	In depth knowledge of curriculum	4

Table 3

Frequency *of Codes Across Data Points*

Themes	Open Codes	Enumeration of Open Codes
Grouping, student-choice, learning styles, and rubrics.	**One to one interview responses**	
	Student-choice	10
	Wait time	6
	Formative assessments	5
	Focus group interview responses	
	Grouping	15
	Rubrics	7
	BYOD	2
	Edmodo	2
	Formative assessments	2
	i-Respond	2
	QR Codes	2
	USA Testprep	2
	Classroom observation results	
	Student grouping	9
	Learning styles	8
	Student ability	6
	Student achievement	6
	Student-choice	5
	Individual	5
	Reward system	2
	Student centered learning strategies	2
	Student movement	2

Table 4

Frequency *of Codes Across Data Points*

Themes	Open Codes	Enumeration of Open Codes
Formative assessments, provide feedback, data-driven decision making, and monitor mastery of standards.	**One to one interview responses**	
	Formative assessments	20
	Diagnostic data	6
	Feedback	5
	Rubrics	3
	Differentiation	2
	Focus group interview responses	
	Provide feedback	12
	Informs future instruction	6
	Weakness identification	5
	Re-address the standards missed	3
	Classroom observation results	
	Check for understanding	11
	Data-driven decision making	8
	Monitor mastery of standards	6
	Grade and return in a timely manner	5
	Oral feedback	4
	Written feedback	4
	Teacher self-assess instructional strategy	4
	Performance task	4

Table 5

Frequency *of Codes Across Data Points*

Themes	Open Codes	Enumeration of Open Codes
Models respect, warmups, high expectations and values student-voice. .	**One to one interview responses**	
	Warmups	9
	High expectations	7
	Teacher costumes	4
	Celebrate exemplary work	3
	Fun environment	3
	Real-world learning	3
	Focus group responses	
	Positive interactions	6
	Attend student activities outside	6
	Listen to student's music	4
	Celebrate holidays from a variety of cultures	3
	Greet students at the door	3
	Make connections	3
	Classroom observation results	
	Models respect	12
	Values student-voice	7
	Maintains pacing	7
	Time focused on teaching and learning	7
	Treats students fairly	6
	Classroom rules are clearly established	6
	Minimal interruptions	5
	Activities links to learning targets	5
	Communicates high expectations	4
	Checks for understanding	3
	Student ownership	3

Table 6

Frequency *of Codes Across Data Points*

Themes	Open Codes	Enumeration of Open Codes
Shows joy for teaching, call parents, warmup, nonverbal cues.	**One to one interview responses**	
	Call parents	9
	Nonverbal cues	8
	Email	5
	Google cell phone	3
	Edmodo	2
	Encourage questions	2
	Focus group interview responses	
	Warmup	9
	High expectations	7
	Teacher costumes	4
	Celebrate exemplary work	3
	Anchor activity	3
	Behavior card	3
	Consequences	3
	Fun environment	3
	Listen	3
	Problem based learning	3
	Technology	3
	Real-World learning	3
	Classroom observation results	
	Shows joy for teaching	13
	Explains curriculum clearly	9
	Encourages questions	9
	Climate of accessibility	8
	Reflection	5
	Positive interactions	5
	Collaborates	5
	Humor	5

Summary

This qualitative case study was conducted to identify the common traits of effective middle school teachers. The following three research protocols were used to collect data: one-to-one interviews, focus group interviews, and classroom observations. Pseudonyms were assigned to the 15 middle school teacher participants in the study to protect privacy and confidentiality. The study was conducted in a school district in Georgia. Four middle schools served as research sites. The five research questions guided the one-to-one interviews, focus group interviews, and classroom observations.

The extensive coding process was used to tease out relationships, reveal the essence of the data and to interpret the data collected. Categories emerged which led to formation of themes. To increase credence in the interpretation of the data collected, triangulation of the data was implemented for the emergence of themes for the five research questions. The themes reflected the relationship between the teacher participants and the attributes that influence their teaching process.

CHAPTER FIVE: CONCLUSIONS

Overview

In recent years, the United States Department of Education has increased teacher accountability measures by focusing on teacher effectiveness and influence on student achievement (US Department of Education, 2013). In Georgia, the federal Race to the Top grant provided the impetus and financial resources to design a state-of-the-art teacher effectiveness system. The Teacher Keys Effectiveness System became operational during the 2014-2015 school year (Georgia Department of Education, 2013).

The purpose of this qualitative case study was to explore the perceptions, feelings, and thoughts of 15 effective middle school teachers regarding the influence of teacher effectiveness on student achievement. Five research questions served as a guide for this qualitative, case study. The research was conducted at four middle school sites in a school district in Georgia. Research was conducted with one-to-one interviews, focus group interviews, and classroom observations. I collected and recorded data from the individual interviews, the focus group interviews, and the classroom observations. The process of data collection, data analysis, and report writing occurred continuously throughout the research study. I read the individual transcripts and the focus group transcripts several times. By immersing myself in the details, I had a better sense of the whole before breaking in down into categories. I used memos that contained hints, clues, and suggestions that were used in the throughout the research process. The next step involved categorizing and coding the data. Themes also called categories which are broad units of the information that consist of codes were aggregated to create a common idea (Creswell, 2013). The final analysis step involved interpretation of the data. Lincoln and Guba (1985) described the

interpretation process as making sense of the data in lessons learned. Finally, I created an in-depth picture of the cases using narrative and tables.

As a result, several themes developed in response to the five research questions. A summary of the research was developed to detail the findings of the study. The results of this study supported the current literature on teacher effectiveness and is addressed in the theoretical and empirical findings portion in chapter five. Suggestions for future research and practical implications are also present in chapter five. Delimitations and limitations of the current study mentions many ways to increase diversity of the teacher participants. Overall recommendations were made for future studies.

Summary of Findings

This case study was driven by five research questions. The first research question asked, "How do effective teachers implement professional knowledge and instructional planning to influence student achievement?" All 15 teacher participants in this study agreed upon the importance of understanding the needs of their students prior to instructional planning. Many teacher participants reported in the one-to-one interview that they took the time at the beginning of the school year to get to know the student interests, learning styles, and academic abilities. Most of the teacher participants also underscored the importance of individualized lessons to meet the needs of the learners rather than a one-size fits all approach to teaching and learning. The results of the research in this study were consistent with the findings of many studies on teacher effectiveness and the importance of teacher knowledge and instructional planning (Weiss & Miller, 2006; Wenglinsky, 2000). The results aligned with current research in the area of teacher effectiveness and adaptability in instructional planning (Dixon et al., 2014). The teacher participants planned for obstacles in learning and prepared scaffolding activities to assist students

in mastery of the standards by adapting the learning activities. The teacher participants were flexible in the delivery of their instruction and were able to easily adjust, adapt, and change up the learning activity to support the needs of the individual leaners throughout the lesson.

The second research question asked, "How do effective teachers implement differentiation and instructional strategies to influence student achievement?" The 15 teacher participants indicated that they used the results of assessment data to determine the individual needs of their students. Most of the teacher participants acknowledged the importance of instructional decision making for differentiated instructional strategies. The teacher participants described how they differentiated based on student-choice, student interest, ability, and learning styles. The findings and results of this research study were consistent with many studies on teacher effectiveness, differentiation, and instructional strategies.

The third research question asked, "How do effective teachers implement and use assessment strategies to influence student achievement?" Most of the teacher participants used a variety of assessment strategies to monitor student progress toward mastery of the standards. Examples of varied assessment strategies used by the teacher participants included the following: (a) Frequent check ins for understanding, (b) the use of rubrics for performance-based-tasks, diagnostic assessments, and (c) formative and summative assessments. The research findings from this case study supported current research on assessment strategies and teacher effectiveness.

The fourth research question asked, "How do effective teachers create a positive and academically challenging environment to influence student achievement?" Most of the teacher participants created a positive learning classroom environment for their students. For example, many teacher participants valued the student-voice and modeled respect for all students. Most

teacher participants indicated the importance of wearing costumes relevant to the curriculum to increase student engagement. Furthermore, many teacher participants attended student events, such as ball games and recitals outside of school. The results of this study were consistent with current research on teacher effectiveness and a positive learning environment (Worley et al., 2007).

The fifth research question asked, "How do effective teachers communicate to influence student achievement?" Most of the teacher participants used a variety of tools to communicate with parents and teachers. Many teacher participants provided students and parents with their Google cell phone number to increase accessibility. Most of the teacher participants communicated high expectations by encouraging student questions. Many teacher participants communicated with their students with the use of humor to increase student engagement. The results of this case study were consistent with the current research on teacher effectiveness and communication with students and parents (Worley et al., 2007).

Discussion

The purpose of this qualitative case study was to explore the perceptions, feelings, and thoughts of 15 middle school teachers regarding the influence on teacher effectiveness on student achievement. Research was conducted in four Georgia middle schools. The research included one-to-one teacher participant interviews, focus group interviews, and classroom observations. The one-to-one interviews as well as the focus group interviews were professionally transcribed. Extensive coding, interpretation, and analysis of the teacher responses to the one-to-one interviews, focus group interviews, and classroom observations was implemented with fidelity. As the information was tallied, themes emerged from the analysis of data. The interpretation of data collected is represented in narrative form and in Tables 2 through 6 in chapter 4.

Theoretical Literature

The results of this case study directly supported the tenants of the Constructivism theoretical framework. Schoen (2008) described the following attributes of constructivism as having a positive influence on student achievement: (a) Active engagement, (b) relevance, (c) real-life learning opportunities, (d) reflection, and (e) meta-cognition.

The results of this case study supported the student-centered constructivism learning theory in that learning needs to be active and learning needs to take place in an environment whereby the interactions are between learners, between learners and teachers, and between learners and subject matter (Reich, 2007). Many of the teacher participants in this case study agreed upon the idea that conventional classes are usually driven by teacher talk and depended heavily on textbooks, and that the conventional method of teaching stifled active learning and creativity.

The results of this study supported the existing literature regarding the role of the teacher in a student-centered class where the teacher is no longer the sole provider of information and knowledge (Bimbola & Daniel, 2010). Most of the teacher participants created a student-centered classroom that encouraged active learning.

The results of this study on teacher effectiveness and the influence on student achievement was consistent with the theoretical framework of Constructivism in that learning environments should allow students to pursue learning opportunities based on their own needs, interests, and experiences (Reich, 2007). The study results supported the Constructive theoretical framework in that the role of the teacher was to facilitate the learning experience (Hyslop-Margison & Strobel, 2008). Most of the teacher participants provided multiple opportunities for student-choice.

The results of this case study of 15 teacher participants mirrored several attributes commonly displayed in an academically robust constructivism classroom (Schoen, 2008). Active learning whereby students were directly involved in the actions of learning. Students saw relevance in the information gained in learning activities and the relationship to their personal life. Flexible grouping opportunities allowed students to collaborate with their peers in a non-competitive manner to construct knowledge

Empirical Literature

Considering the empirical literature, the results of this study mirrored the results of numerous studies that have cited that effective teachers planned for differentiation (Goodwin, 2017; Waldrip et al., 2016). Studies of effective teachers reported that students were grouped for best learning results. Studies have reported that effective teachers differentiated and personalized instruction which allowed students to set goals, make choices and monitor their own progress (Basham et al., 2016).

In most cases, novice teachers create one-size-fits-all lesson plans whereas effective teachers designed differentiation opportunities throughout the lesson plan (Livingston & Borko, 1989; Stronge, 2007). All 15 teacher participants agreed upon the importance of getting to know their students to design lesson plans based on the needs of the students. The teacher participants in this study created purposeful instructional lesson plans that included opportunities for enrichment as well as remediation.

Stronge et al. (2007) found that effective teachers created lesson plans to include remediation and academic enrichment opportunities based on the needs of their students. Studies conducted on teacher effectiveness and lesson planning revealed that effective teachers understood their students as individuals. Lesson planning was based on student learning styles,

prior achievement, needs, and abilities, (Bain & Jacobs, 1990; Brookhart & Loadman, 1992; Wenglinsky, 2002). Most of the teacher participants in this study underscored the importance of accommodating the student learning styles. A meta-analysis of 36 research studies revealed that the effects of using learning styles positively influenced student achievement. The mean achievement of at-risk students increased one standard deviation when student-learning styles were accommodated (Dunn et al., 1995).

All 15 teacher participants agreed upon the importance of differentiation to influence student achievement. Previous studies on teacher effectiveness and differentiation reported effective teachers recognized individual and group needs and accommodated those needs in their planning for instruction. Effective teachers selected from a range of strategies to accommodate the needs of the students (Cawelti, 2004; Tomlinson, 1999, 2001). Several teacher participants shared in their one-to-one interview that they planned for individual, small group, and whole group instruction. The results of this study directly supported the findings of research on teacher effectiveness and differentiation in that the differentiated lesson was a blend of flexible grouping, which included whole group instruction, small group instruction, and individualized instruction (Fulmer & Polikoff, 2014; Good & Brophy, 2004; Guskey & McTighe, 2016; Li, 2016; Livingston & Borko, 1989; Sabers et al., 1991; Zuiker & Whitaker, 2014). The teacher participants in this study mentioned the use of flexible grouping, student-centered learning strategies, and differentiation based on student-choice, learning styles, and student ability in their one-to-one interviews and focus group interviews.

The results of the research in this study are consistent with numerous studies on teacher effectiveness and assessment. Research studies have found that effective teachers used a balance of formative and summative assessments and transformed the results of the assessment into

instructional strategies that met the needs of the students (Bertrand & Marsh, 2015). Effective

teachers diagnosed student learning, identified gaps in the learning, and informed instructional

decision-making based on the results of formative assessment (Williams et al., 2014). The

teacher participants stressed the importance of using formative assessments to monitor the

progress toward mastery of the learning target. The teacher participants in this study used

assessments to drive important decision making such as differentiation of lesson plans.

The findings of this study supported the current research literature on teacher

effectiveness and assessment strategies and uses of assessment. For example, Black and Wiliam

(1998a, 1998b) examined a plethora of empirical studies to determine the effectiveness of

classroom assessments on student achievement. The research found that formative assessments

had a substantial positive effect on student achievement. Moreover, the research indicated that

formative assessment was particularly effective for the low achieving students. Hattie and

Timperley (2007) conducted a large-scale review of research that reported effective teachers

continually assessed their student's level of understanding and progress toward mastery of the

standards. The research also noted that effective teachers provided relevant and useful feedback.

Tomlinson (2007) noted that effective teachers used a variety of assessment tools such as exit

tickets, observations, and interest surveys to monitor student progress. All 15 teacher participants

used a variety of assessment strategies to monitor mastery of the standards and to provide

feedback to students and their parents.

The results of this study regarding feedback supported the current research on assessment

in that constructive feedback based on assessments was considered an effective tool in

communicating student progress to both the parents and students (Chappuis & Stiggins, 2002;

Guskey & McTighe, 2016; Li, 2016). All 15 teacher participants agreed upon the importance of

providing feedback in a timely manner to influence student achievement. The results of this study are consistent with numerous studies on teacher effectiveness and a positive learning environment. Studies of effective teachers and the creation of a positive learning environment have a sense of humor, are even tempered, and are open to change (Buttner et al., 2015). Woods (2018) reported the following indicators for effective teachers with a positive learning environment: (a) Respect for diversity, (b) actively listened to the student-voice and (c) created a warm and inviting classroom. The teacher participants in this study fully understood the importance of a positive learning environment by having high expectations, celebrating exemplary work, having positive interactions with the students, and teachers wearing costumes to deliver the curriculum.

According to the Georgia Department of Education (2013), a positive learning environment was defined as caring, supportive, and safe. The results of a study conducted by Cornell and Mayer (2010) reported that student success was dependent upon a trusting and mutually respectful relationship with the classroom teacher. A safe learning climate was linked to favorable learning outcomes. The findings of this research study was consistent with the synthesis of 119 studies conducted by Jeffrey (2007). Jeffrey focused on the influence of a positive student-teacher relationship on achievement outcomes. Overall, the meta-analysis revealed that student-centered positive teacher variables had a positive influence on student achievement. All 15 participants agreed upon the importance of a positive learning environment. The teacher participants were enthusiastic about teaching and learning. They encouraged their students to take responsibility for their learning. Research on personal teacher qualities and the influence on teacher effectiveness have included the following: (a) Caring, (b) fairness, (c) enthusiasm, (d) motivation, (e) attitude toward teaching and (f) encouragement of responsibility.

(Adams & Singh, 1998; Corbett & Wilson, 2002; Cruickshank & Haefele, 2001; Darling-Hammond, 2001; Good & Brophy, 2004; Greenberg et al., 2014; Hamre & Pianta, 2005; Perle, 2016; Quek, 2005; Rowan et al., 1997; Sandilos et al., 2017; Tomlinson, 2015). The use of teacher costumes to deliver the curriculum and the influence on student achievement is noteworthy and should be considered for future research. This study corroborated the results of numerous studies on teacher effectiveness and communication. Woods (2018) reported the following indicators of teacher effectiveness and communication: (a) Shared expectations with students and parents in a timely manner, (b) used multiple modes of communication and (c) created a climate of accessibility. The teacher participants in this study encouraged student questions, used nonverbal cues, provided a Google cell phone number to parents and updated their classroom log to communicate with parents and students. The results of this study are consistent with previous studies of effective teachers and the adaptation of the instruction to recognize diversity in student's backgrounds, readiness, language, and language preferences (Dixon et al., 2014). Teacher participants understood and celebrated the cultural backgrounds of their students. The results of this study contributed to the field of education as it confirms and corroborates current research in the area of teacher effectiveness and the influence on student achievement. This study revealed the myriad of skills that effective teachers balance daily to increase student achievement. This study confirms that effective teachers are heavy lifters, multi-taskers, and reflective in their professional practice. This study concurs with current research on teacher effectiveness in that effective teachers plan for lessons based on the needs of their students, differentiate instruction, use assessment strategies, create positive learning environments, and communicate high expectations with students and parents.

Implications

The research for this study was driven by the five research questions. The results of this study suggested that effective teachers shared similar attributes and dispositions as identified by the common themes. In order to hire and retain the most effective teachers in our nation's classrooms, it is imperative to understand the attributes and dispositions of effective teachers. Prior research on teacher effectiveness has indicated effective teachers positively influenced student achievement (Stronge et al., 2007).

Implications for Leaders of University and College Education Programs

Colleges and universities with teacher certification programs would benefit from understanding the dispositions and attributes of the effective teacher participants in this study. Course work, classroom observations, and student teaching should focus on the identification of effective teacher attributes and dispositions. Prior to student teaching experience, college students should have multiple opportunities to observe and shadow effective teachers. Student teachers who do not possess the dispositions of an effective teacher may require additional course work, counseling and additional practice in student teaching.

Implications for K-12 Administrator

K-12 school administrators need to be well trained in the 10 Georgia teacher performance standards. Administrators need to provide teachers immediate and consistent feedback on the 10 teacher performance standards. The school administrator's role should be representative of a coaching model rather than that of an evaluator. Effective teachers should be rewarded for their hard work with descriptive and authentic feedback on the teacher evaluation portal. Teachers struggling to implement effective measures on any of the 10 teacher performance standards should be coached and should have multiple opportunities for improvement.

It is incumbent upon school districts in Georgia and throughout the nation to hire the most effective teachers to increase student achievement. This case study provides the insight on the teaching attributes and dispositions of the fifteen teacher participants. Administrators and school district leaders need to have a deep understanding of the attributes that contribute to teacher effectiveness. Human resource officers as well as administrators benefit from knowing the attributes and dispositions of effective teachers. Certain questions should be used during the interview process as a guide to determine if the candidate displays the attributes and dispositions of effective teachers. School leaders should provide professional development opportunities for teachers to improve their teaching skill set. Moreover, school leaders should recognize and celebrate the contributions of effective teachers.

Implications for K-12 Teachers

The fifteen teacher participants in this study openly shared their perceptions and feelings regarding teacher effectiveness in the one-to-one interviews and the focus group interviews. K-12 teachers who want to improve their professional practice would benefit from reading the results of this study. The thoughts, perceptions, and responses shared by the teacher participants are nuggets of wisdom that should be easily replicated by K-12 teachers in the classroom.

Implications for Stakeholders

It is important for all stakeholders in a school community to have a better understanding of the attributes and dispositions of effective teachers. At the beginning of each school year, parents and students alike are hopeful that the newly assigned teacher will possess the attributes, dispositions and traits of an effective teacher. As a community of stakeholders, effective teachers should be identified, recognized, and celebrated for the heroic efforts displayed in the classroom.

Deliminations and Limitations

My rational for choosing middle school teacher participants was that I have spent most of my career at the middle school level and it is an area of personal interest. I purposefully selected general education middle school teachers who earned the highest score (Level IV) in the mean student growth model score as reported by the Georgia Department of Education on the State Longitudinal Data System (Woods, 2018). Teachers with a mean student growth model score of 65% or higher were rated level IV. The teacher participants had a level IV score for the mean student growth model as reported in the State Longitudinal Data System at least one time over the past three years. Several limitations were present in this case study. The teacher participants represented only general education middle school teachers. Future studies of teacher effectiveness should include effective special education teacher participants as well as effective nonacademic teacher participants to increase generalizability. All of my teacher participants were Caucasian. Future studies of teacher effectiveness should strive for a more diverse teacher participant group. Another limitation was that all but three of the teacher participants were female. Future studies of teacher effectiveness would benefit from a more evenly representation of male and female teacher participants. In addition, the four research sites were located in a similar suburban setting within the school district. Another limitation was that the four research sites had similar student demographics. In order to increase generalizability, future research sites should be representative of urban, suburban and rural locations. One of the four focus groups was intended to be much larger and resulted in just two teacher participants. Question number 24 on the one-to-one interview protocol proved to be problematic. The question was poorly written and teacher participants had difficulty answering the question. Each participant in the one-to-one interview asked for clarity of question number 24 and the question had to be paraphrased to

provide clarity. Additionally, my lack of experience in conducting one-to-one interviews and focus group interviews proved to be a daunting task at the beginning of the research process. However, with each interview, my confidence in conducting a formal interview improved.

Recommendations for Future Research

The data in this case study validated prior studies on the attributes and dispositions of effective teachers. Recommendations for future research include the following: replication of the research should be conducted at the elementary and high school levels. In addition, special education teachers and nonacademic teachers should be included as teacher participants. This case study should be replicated in various school districts to provide greater generalizability and to affirm the attributes of effective teachers. Additionally, the research sites should include a rural and urban setting to increase demographic diversity. Finally, the participant group should be expanded to include students, parents and administrators.

Topics for future research in the area of teacher effectiveness and the influence on student achievement should include the following: the influence of effective nonacademic teachers on student achievement, the influence of effective special education teachers on student achievement and the influence of effective school leaders on student achievement. Additional topics for further research should include the influence of professional development to improve teacher effectiveness and the influence of teacher evaluations on student achievement. Lastly, I recommend future research regarding the use of teacher costumes to deliver instruction and the influence on student engagement and how it relates to a positive learning environment.

Summary

Federal legislators have called for equality in education and teacher accountability measures in the past 40 years (US Department of Education, 2013). Sweeping legislative

educational mandates along with the infusion of billions of dollars into the public school system

have left legislators and education policy makers frustrated with the inability to truly hold

teachers and schools accountable for closing the achievement gap (Kolbe & Rice, 2012). The

Georgia RTTT educational policy reform was hopeful that teacher effectiveness measures could

finally take a foothold in student achievement with an underlying belief that every child in every

school in Georgia deserves effective classroom teachers. As a result of the Georgia RTTT award,

a new teacher evaluation system was designed to increase teacher effectiveness and became fully

implemented during the 2014-2015 school year (Georgia Department of Education, 2014). The

newly designed teacher evaluation system coupled with a next generation Georgia Milestones

statewide assessment represented paradigm shifts in teaching, learning, teacher accountability,

next generation assessments, and ultimately student achievement. With historic measures

mandated to change the educational landscape, teacher effectiveness and the influence on student

achievement became an area of heightened interest at the state, school district and local school

levels.

The goal of the Georgia TKES was to provide teachers with more feedback on a

multitude of factors aligned with ten teaching domains. With increased measures of feedback,

teachers should be able to hone their craft to increase academic learning and increase positive

academic outcomes (Georgia Department of Education, 2014). The dispositions and attributes

shared in this study by the fifteen middle school teacher participants can serve as a guide to

effective teaching not only for teachers struggling to implement best practices but also for

teachers who continually seek to improve their professional craftsmanship. The varied skill set

needed to become an effective teacher represents the complexity of a teacher's job. The greatest

take away from this study is the profound importance of creating a positive learning

environment. Teachers who excel in creating a positive learning environment exceed their job expectations. The skills needed to create a positive learning environment as gleaned from my teacher participants include setting high expectations, celebrating exemplary work, creating a fun environment, valuing the student voice, modeling respect, attending student activities outside of school and teachers wearing costumes.

REFERENCES

Adams, C. R., & Singh, K. (1998). Direct and indirect effects of school learning variables on the academic achievement of African American 10th graders. *The Journal of Negro Education, 67*(1), 48-66.

Aldeman, C. (2017). The teacher evaluation revamp, in hindsight: what the Obama administration's signature reform got wrong. *Education Next, 17*, 60+.

Aleamoni, L. M. (1999). Student rating myths versus research facts from 1924 to 1998. *Journal of Personnel Evaluation in Education, 13*(2), 153-166.

Allington, R. L. (2002). What I've learned about effective reading instruction. *Phi Delta Kappan, 83*(10), 740-747.

Anonymous. (2013). Teacher effectiveness: The role of context. *Harvard Educational Review, 83*(2), 346-348.

Backes, B., Cowan, J., Goldhaber, D., Koedel, C., Miller, L. C., & Xu, Z. (2018). The common core conundrum: To what extent should we worry that changes to assessments will affect test-based measures of teacher performance? *Economics of Education Review, 62*, 48-65.

Bain, H. P., & Jacobs, R. (1990). The case for smaller classes and better teachers. *National Association of Elementary School Principals, 9*(1).

Balch, R. T. (2012). *The validation of a student survey on teacher practice.* (3534430 Ph.D.), Vanderbilt University, Ann Arbor. ProQuest Dissertations & Theses Full Text database.

Ballou, D., & Springer, M. G. (2015). Using student test scores to measure teacher performance: Some problems in the design and implementation of evaluation systems. *Educational Researcher, 44*(2), 77-86.

Barge, J. D. (2011). *Classroom analysis of state standards*. Atlanta: State School Superintendent.

Barnes, C. R. (2011). Chalk talk: "Race to the top" only benefits big government. *Journal of Law & Education, 40*(2), 393-402.

Basham, J. D., Hall, T. E., Carter, R. A., & Stahl, W. M. (2016). An operationalized understanding of personalized learning. *Journal of Special Education Technology, 31*(3), 126-136.

Beck, C. R. (2001). Matching teaching strategies to learning style preferences. *The Teacher Educator, 37*(1), 1-15.

Becker, E. S., Goetz, T., Morger, V., & Ranellucci, J. (2014). The importance of teachers' emotions and instructional behavior for their students' emotions – An experience sampling analysis. *Teaching and Teacher Education, 43*, 15-26.

Bell, C., Goe, L., & Little, O. (2008). *Approaches to evaluating teacher effectiveness: A research synthesis*. Retrieved from Washington, D. C.:

Berliner, D. C. (1986). In pursuit of the expert pedagogue. *Educational Researcher, 15*(7), 5-13.

Bertrand, M., & Marsh, J. A. (2015). Teachers' sensemaking of data and implications for equity. *American Educational Research Journal, 52*(5), 861-893.

Betebenner, D. W. (2009). Norm- and criterion-referenced student growth. *Educational Measurement: Issues & Practice, 28*(4), 42-51.

Betebenner, D. W. (2011). A technical overview of the student growth percentile methodology: Student growth percentiles and percentile growth projections/trajectories. *The National Center for the Improvement of Educational Assessment*.

Bimbola, O., & Daniel, O. I. (2010). Effect of constructivist-based teaching strategy on academic performance of students in integrated science at the junior secondary school level. *Educational Research and Reviews, 5*(7), 347-353.

Black, P., & Wiliam, D. (1998a). Assessment and Classroom Learning. *Assessment in Education: Principles, Policy & Practice, 5*(1), 7-74.

Black, P., & Wiliam, D. (1998b). Inside the black box: Raising standards through classroom assessment. *The Phi Delta Kappan, 80*(2), 139-148.

Bloom, T. (2010). *College and career readiness: A systemic P-20 response*. Retrieved from Cincinatti, OH:

Borko, H., & Livingston, C. (1989). Cognition and improvisation: Differences in mathematics instruction by expert and novice teachers. *American Educational Research Journal, 26*(4), 473-498.

Brookhart, S. M., & Loadman, W. E. (1992). Teacher assessment and validity: What do we want to know? *Journal of Personnel Evaluation in Education, 5*(4), 347-357.

Brophy, J. E., & Good, T. L. (1984). Teacher behavior and student achievement. *Program for Teaching and Instruction of the National Institute of Education*(164 p.), 164 p.

Bundick, M. J., Quanglia, R. J., Corso, M. J., & Haywood, D. E. (2014). Promoting student engagement in the classroom. *Teachers College Record, 116*(4), 2-21.

Burgher, J. K., Finkel, D., Adesope, O. O., & Wie, B. J. V. (2015). Implementation of a modular hands-on learning pedagogy: Student attitudes in a fluid mechanics and heat transfer course. *Journal of STEM Education : Innovations and Research, 16*(4), 44.

Buttner, S., Pijl, S. J., Bijstra, J., & van den Bosch, E. (2015). Personality traits of expert teachers of students with behavioural problems: a review and classification of the literature. *Australian Educational Researcher, 42*(4), 461-481.

Byer, J. L. (1999). *The effects of students' perceptions of classroom social climate in middle school social studies classes on academic self-concept.* (Dissertation/Thesis), ProQuest Dissertations Publishing.

Capraro, M. M., Bicer, A., Grant, M. R., & Lincoln, Y. S. (2017). Using precision in STEM language: A qualitative look. *International Journal of Education in Mathematics, Science and Technology, 5*(1), 29-39.

Carbonneau, K. J., & Marley, S. C. (2015). Instructional guidance and realism of manipulatives influence preschool children's mathematics learning. *The Journal of Experimental Education, 83*(4), 495-513.

Carmichael, S. B., Martino, G., Porter-Magee, K., & Wilson, W. S. (2010). *State of the state standards-and the common core-in 2010.* Retrieved from Washington, D. C.: https://edexcellence.net/publications/the-state-of-state-of-standards-and-the-common-core-in-2010.html

Carolan, J., & Guinn, A. (2007). Differentiation: Lessons from master teachers. *Educational Leadership, 64*(5), 44-47.

Carter, P. J. (2003). *A review of highly effective teachers in Hamilton County: Analysis of current trends and implications for improvement*. Retrieved from Chattanooga, TN: http://www.pefchattanooga.org/wp-content/uploads/2012/08/Review-of-Highly-Effective-Teachers-HCDE.pdf

Cawelti, G. (Ed.) (2004). *Handbook of Research on Improving Student Achievement* (3rd ed.). Arlington, VA: Educational Research Service.

CCSSO. (2007). Recommendations to reauthorize the elementary and secondary education act (pp. 9). Washington, D. C.: The Council of Chief State School Officers.

Chan, P. E., Graham-Day, K. J., Ressa, V. A., Peters, M. T., & Konrad, M. (2014). Beyond Involvement:Promoting Student Ownership of Learning in Classrooms. *Intervention in School and Clinic, 50*(2), 105-113.

Chappuis, S., & Stiggins, R. J. (2002). Classroom assessment for learning. *Educational Leadership, 60*(1), 40.

Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. Thousand Oaks, CA: Sage Publications.

Conley, D. T. (2014). *The common core state standards: Insight into their development and purpose*. Retrieved from Washington, D. C.: https://www.inflexion.org/ccss-development-and-purpose/

Connor, C. M., Morrison, F. J., Fishman, B., Crowe, E. C., Al Otaiba, S., & Schatschneider, C. (2013). A longitudinal cluster-randomized controlled study on the accumulating effects of individualized literacy instruction on students' reading from first through third grade. *Psychological Science, 24*(8), 1408-1419.

Cope, D. G. (2014, 2014/01//). Methods and meanings: credibility and trustworthiness of qualitative research. *Oncology Nursing Forum, 41,* 89+.

Corbett, D., & Wilson, B. (2002). What urban students say about good teaching. *Educational Leadership, 60*(1), 18-22.

Corbett, D., Wilson, B. L., & Williams, B. (2002). *Effort and excellence in urban classrooms: Expecting, and getting, success with all students*. Washington, D.C.: Teacher College Press.

Cornell, D. G., & Mayer, M. J. (2010). Why do school order and safety matter? *Educational Researcher, 39*(1), 7-15.

Covino, E., & Iwanicki, E. (1996). Experienced teachers: Their constructs of effective teaching. *Journal of Personnel Evaluation in Education, 10*(4), 325-363.

Crawford, J. (2011). Frequently asked questions about reauthorization of the elementary and secondary education act (ESEA) ... and the policy issues at stake (pp. 10). Portland, OR: DiversityLearningK12.

Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches* (3rd ed.). Thousand Oaks: SAGE Publications.

Cruickshank, D. R., & Haefele, D. (2001). Good teachers, plural. *Educational Leadership, 58*(5), 26.

Danielson, C. (2001). New trends in teacher evaluation. *Educational Leadership, 58*(5), 12.

Darling-Hammond, L. (2001). The challenge of staffing our schools. *Educational Leadership, 58*(8), 12.

Darling-Hammond, L., Amrein-Beardsley, A., Haertel, E., & Rothstein, J. (2012). Evaluating teacher evaluation. *Phi Delta Kappan, 93*(6), 8-15.

Day, S. L. (2002). Real kids, real risks: Effective instruction of students at risk of failure. *NASSP Bulletin, 86*, 19-32.

Dietrich, J., Dicke, A.-L., Kracke, B., & Noack, P. (2015). Teacher support and its influence on students' intrinsic value and effort: Dimensional comparison effects across subjects. *Learning and Instruction, 39*, 45-54.

Dixon, F. A., Yssel, N., McConnell, J. M., & Hardin, T. (2014). Differentiated instruction, professional development, and teacher efficacy. *Journal for the Education of the Gifted, 37*(2), 111-127.

Doan, K. P. (2008, 2008 Winter). No child left behind waivers: A lesson in federal flexibility or regulatory failure? *Administrative Law Review, 60,* 211+.

Doherty, K., & Jacobs, S. (2013). *State of the states 2013 connect the dots: Using evaluations of teacher effectiveness to inform policy and practice*. Retrieved from Washington, D. C.:

Duckor, B. (2014, 2014/03//). Formative assessment in seven good moves. *Educational Leadership, 71,* 28-32.

Dunn, R., Griggs, S. A., Olson, J., Beasley, M., & Gorman, B. S. (1995). A Meta-analytic validation of the dunn and dunn model of learning-style preferences. *The Journal of Educational Research, 88*(6), 353-362.

Eisner, E. W. (2003). Preparing for today and tomorrow. *Educational Leadership, 61*(4), 6-10.

Emmer, E. T., Evertson, C. M., & Worsham, M. E. (2003). *Classroom management for secondary teachers* (6th ed. ed.). Boston: Allyn & Bacon.

Emmer, E. T., & Stough, L. M. (2001). Classroom management: A critical part of educational psychology, with implications for teacher education. *Educational Psychologist, 36*(2), 103-112.

Epstein, J. L., & Sheldon, S. B. (2002). Present and accounted for: Improving student attendance through family and community involvement. *The Journal of Educational Research, 95*(5), 308-318.

Everson, K. C., Feinauer, E., & Sudweeks, R. R. (2013). Rethinking teacher evaluation: A conversation about statistical inferences and value-added models. *Harvard Educational Review, 83*(2), 349-370,400,402.

Fan, X., & Chen, M. (2001). Parental involvement and students' academic achievement: A meta-analysis. *Educational Psychology Review, 13*(1), 1-22.

Fitzgerald, A., Dawson, V., & Hackling, M. (2013). Examining the beliefs and practices of four effective Australian primary science teachers. *Research in Science Education, 43*(3), 981-1003.

Foegen, A., Jiban, C., & Deno, S. (2007). Progress monitoring measures in mathematics: A review of the literature. *The Journal of Special Education, 41*(2), 121-139.

Follman, J. (1992). Secondary school students' ratings of teacher effectiveness. *The High School Journal, 75*(3), 168-178.

Fraser, B. J., & Fisher, D. L. (1982). Predicting students' outcomes from their perceptions of classroom psychosocial environment. *American Educational Research Journal, 19*(4), 498-518. doi:10.2307/1162539

Fuchs, L. S., Deno, S. L., & Mirkin, P. K. (1984). The effects of frequent curriculum-based measurement and evaluation on pedagogy, student achievement, and student awareness of learning. *American Educational Research Journal, 21*(2), 449-460.

Fulmer, G. W., & Polikoff, M. S. (2014). Tests of alignment among assessment, standards, and instruction using generalized linear model regression. *Educational Assessment, Evaluation and Accountability, 26*(3), 225-240.

Gall, M. D., Gall, J. P., & Borg, W. R. (2006). *Educational research: An introduction* (8th ed.). Boston: Pearson.

Garza, R., Alejandro, E. A., Blythe, T., & Fite, K. (2014). Caring for students: What teachers have to say. *ISRN Education, 2014*, 1-7.

Georgia Department of Education. (2013). *Teacher keys effectiveness system*. Atlanta: State of Georgia.

Georgia Department of Education. (2014). *Teacher keys effectiveness system: Implementation handbook*. Atlanta: Georgia Department of Education.

Glazerman, S., Loeb, S., Goldhaber, D., Staiger, D., Raudenbush, S., & Whitehurst, G. (2010). Retrieved from Washington, D.C.: https://cepa.stanford.edu/content/evaluating-teachers-important-role-value-added

Goffin, S. G., Hamre, B. K., & Kraft-Sayre, M. (2010). *Classroom assessment scoring system (CLASS) implementation guide*. Retrieved from Charlottesville: https://researchingparents.wordpress.com/2012/01/11/classroom-assessment-scoring-system-class-hamre-goffin-kraft-sayre/

Good, T. L., & Brophy, J. E. (2004). *Looking in classrooms*. Boston: Allyn & Bacon.

Goodwin, B. (2017). Getting personalization right. *Educational Leadership, 74*(6), 80-81.

Greenberg, J., Putman, H., & Walsh, K. (2014). *Training our future teachers: Classroom management*. Retrieved from https://eric.ed.gov/?id=ED556312

Gronlund, N. E. (2006). *Assessment of student achievement* (8th ed.). Boston: Pearson.

Guskey, T. R., & McTighe, J. (2016). Pre-assessment promises and cautions (Vol. 73, pp. 38). Alexandria: Association for Supervision and Curriculum Development.

Hallinger, P., Heck, R. H., & Murphy, J. (2014). Teacher evaluation and school improvement: An analysis of the evidence. *Educational Assessment, Evaluation and Accountability, 26*(1), 5-28.

Hamre, B. K., & Pianta, R. C. (2005). Can instructional and emotional support in the first-grade classroom make a difference for children at risk of school failure? *Child Development, 76*(5), 949-967.

Hamre, B. K., Pianta, R. C., Downer, J. T., DeCoster, J., Mashburn, A. J., Jones, S. M., . . . Hamagami, A. (2013). Teaching through interactions: Testing a developmental framework of teacher effectiveness in over 4,000 classrooms. *The Elementary School Journal, 113*(4), 461-487.

Hanover Research. (2013). *Student perception surveys and teacher assessments*. Retrieved from Washington, D. C.: https://dese.mo.gov/sites/default/files/Hanover-Research-Student-Surveys.pdf

Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research, 77*(1), 81-112.

Haynie, G. (2006). Effective biology teaching: A value-added instructional improvement analysis model. *E&R Report, 05*(28).

Heise, M. (2017). From no child left behind to every student succeeds: Back to a future for education federalism. *Columbia Law Review, 117*(7), 1859-1896.

Hershberg, T., & Robertson-Kraft, C. (2010). Maximizing the opportunity provided by 'race to the top'. *PERSPECTIVES ON URBAN EDUCATION, Summer*, 128-131.

Hill, N. E., & Tyson, D. F. (2009). Parental involvement in middle school: A meta-analytic assessment of the strategies that promote achievement. *Developmental Psychology, 45*(3), 740-763.

Huguet, A., Marsh, J. A., & Farrell, C. (2014). Building teachers' data-use capacity: Insights from strong and developing coaches. *2014, 22*.

Hyslop-Margison, E. J., & Strobel, J. (2008). Constructivism and education: Misunderstandings and pedagogical implications. *The Teacher Educator, 43*(1), 72-86.

Jeffrey, C.-W. (2007). Learner-centered teacher-student relationships are effective: A meta-analysis. *Review of Educational Research, 77*(1), 113-143.

Johnson, B. L., Jr. (1997). An organizational analysis of multiple perspectives of effective teaching: Implications for teacher evaluation. *Journal of Personnel Evaluation in Education, 11*(1), 69-87.

Keller, M. M., Hoy, A. W., Goetz, T., & Frenzel, A. C. (2016). Teacher enthusiasm: Reviewing and redefining a complex construct. *Educational Psychology Review, 28*(4), 743-769.

Kerr, K. A., Marsh, J. A., Ikemoto, G. S., Darilek, H., & Barney, H. (2006). Strategies to promote data use for instructional improvement: Actions, outcomes, and lessons from three urban districts. *American Journal of Education, 112*(4), 496-520.

Koch, T. (2006). Establishing rigour in qualitative research: the decision trail. *Journal of Advanced Nursing, 53*(1), 91-100.

Kolbe, T., & Rice, J. K. (2012). And they're off: Tracking federal race to the top investments from the starting gate. *Educational Policy, 26*(1), 185-209.

Koppich, J. E., & Esch, C. (2012). Grabbing the brass ring: Who shapes teacher policy? *Educational Policy, 26*(1), 79-95.

Kraft, M. A., & Gilmour, A. F. (2017). Revisiting the widget effect: Teacher evaluation feforms and the distribution of teacher effectiveness. *Educational Researcher, 46*(5), 234-249.

Kring, A. M., & Johnson, S. L. (2014). *Abnormal psychology: DSM-5 update* (Twelfth ed.). Hoboken, NJ: John Wiley & Sons, Inc.

Kyriakides, L. (2005). Drawing from teacher effectiveness research and research into teacher interpersonal behaviour to establish a teacher evaluation system: A study on the use of

student ratings to evaluate teacher behaviour. *Journal of Classroom Interaction, 40*(2), 44-66.

La Paro, K. M., Pianta, R. C., & Stuhlman, M. (2004). The classroom assessment scoring system: Findings from the prekindergarten year. *The Elementary School Journal, 104*(5), 409-426.

Langer, J. A. (2001). Beating the odds: Teaching middle and high school students to read and write well. *American Educational Research Journal, 38*(4), 837.

Learning Point Associates. (2010). *Evaluating teacher effectiveneess: Emerging trends reflected in the state phase 1 RACE TO THE TOP applications*. Retrieved from Naperville, IL:

Leithwood, K., & Azah, V. N. (2017). Characteristics of high-performing school districts. *Leadership and Policy in Schools, 16*(1), 27-53.

Li, H. (2016). How is formative assessment related to students' reading achievement? Findings from PISA 2009. *Assessment in Education: Principles, Policy & Practice, 23*(4), 473-494.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Thousand Oaks: Sage Publications.

Livingston, C., & Borko, H. (1989). Expert-novice differences in teaching: A cognitive analysis and implications for teacher education. *Journal of Teacher Education, 40*(4), 36-42.

Lockwood, J. R., & Castellano, K. E. (2017). Estimating true student growth percentile distributions using latent regression multidimensional IRT models. *Educational and Psychological Measurement, 77*(6), 917-944.

Loewus, L. (2017). Are states changing course on teacher evaluation? *Education Week, 37*(13).

Manna, P., & Ryan, L. L. (2011). Competitive grants and educational federalism: President Obama's race to the top program in theory and practice. *Oxford University Press, 41*(3), 522-546.

Marzano, R. J. (2003). *What works in schools*. Alexandria: Association for Supervision and Curriculum Development.

Marzano, R. J., McTighe, J., & Pickering, D. (1993). *Assessing student outcomes: Performance assessment using the dimensions of learning model*. Alexandria: Association for Supervision and Curriculum Development.

Marzano, R. J., Pickering, D., & Pollock, J. E. (2001). *Classroom instruction that works : Research-based strategies for increasing student achievement*. Alexandria: Association for Supervision and Curriculum Development.

Marzano, R. J., Schooling, P., & Toth, M. (n.d.). *Creating an aligned system: To develop great teachers within the federal race to the top initiative*. Retrieved from Englewood: http://www.iobservation.com/whitepapers/marzano-white-paper-on-race-to-the-top/

Matsumura, L. C., Patthey-Chavez, G. G., Valdés, R., & Garnier, H. (2002). Teacher feedback, writing assignment quality, and third-grade students' revision in lower-and higher-achieving urban schools. *The Elementary School Journal, 103*(1), 3-25.

McCaffrey, D. F., Castellano, K. E., & Lockwood, J. R. (2015). The impact of measurement error on the accuracy of individual and aggregate SGP. *Educational Measurement: Issues and Practice, 34*(1), 15-21.

McGuinn, P. (2012). Stimulating reform: Race to the top, competitive grants and the Obama education agenda. *Educational Policy, 26*(1), 136-159.

Merriam, S. B. (2009). *Qualitative research: A guide to design and implementation* (Second ed.). San Francisco: Jossey-Bass.

MET Project. (2010). *Learning about teaching: Initial findings from the measures of effective teaching project*. Retrieved from Seattle, WA: https://eric.ed.gov/?id=ED528382

MET Project. (2012). *Asking students about teaching: Student perception surveys and their implementation*. Retrieved from Seattle, WA: https://eric.ed.gov/?id=ED566384

Miller-Cribbs, J. E., Cronen, S., Davis, L., & Johnson, S. D. (2002). An exploratory analysis of factors that foster school engaement and completion among African American students. *Children & Schools, 24*(3), 159.

Miller, M. D., Linn, R. L., & Gronlund, N. E. (2013). *Measurement and assessment in teaching* (11th ed.). Upper Saddle River: Merrill/Pearson.

Misulis, K. (1997). Content analysis: A useful tool for instructional planning. *Contemporary Education, 69*(1), 45-47.

Molnar, A., Smith, P., Zahorik, J., Palmer, A., Halbach, A., & Ehrle, K. (1999). Evaluating the SAGE program: A pilot program in targeted pupil-teacher reduction in Wisconsin. *Educational Evaluation and Policy Analysis, 21*(2), 165-177.

Monroe, S., & Cai, L. (2015). Examining the reliability of student growth percentiles using multidimensional IRT. *Educational Measurement: Issues and Practice, 34*(4), 21-30.

Morris, P. A., & Reardon, S. F. (2017). Moving education science forward by leaps and bounds: The need for interdisciplinary approaches to improving children's educational trajectories. *Journal of Research on Educational Effectiveness, 10*(1), 1-6.

Muñoz, M. A., & Chang, F. C. (2007). The elusive relationship between teacher characteristics and student academic growth: A longitudinal multilevel model for change. *Journal of Personnel Evaluation in Education, 20*(3-4), 147-164.

Muñoz, M. A., & Dossett, D. H. (2016). Multiple measures of teaching effectiveness: Classroom observations and student surveys as predictors of student learning. *Planning and Changing, 47*(3/4), 123-140.

Natriello, G. (1987). The impact of evaluation processes on students. *Educational Psychologist, 22*(2), 155.

Palardy, G. J., & Rumberger, R. W. (2008). Teacher effectiveness in first grade: The importance of background qualifications, attitudes, and instructional practices for student learning. *Educational Evaluation and Policy Analysis, 30*(2), 111-140.

Panasuk, R., Stone, W., & Todd, J. (2002). Lesson planning strategy for effective mathematics teaching. *Education, 22*(2), 714, 808-827.

Parsons, S. A., & Vaughn, M. (2016). One teacher's instructional adaptations and her students' reflections on the adaptations. *The Journal of Classroom Interaction, 51*(1), 4-17.

Parsons, S. A., Vaughn, M., Scales, R. Q., Gallagher, M. A., Parsons, A. W., Davis, S. G., . . . Allen, M. (2018). Teachers' instructional adaptations: A research synthesis. *Review of Educational Research, 88*(2), 205-242.

Patton, M. Q. (2015). *Qualitative research & evaluation methods: Integrating theory and practice*. Thousand Oaks: Sage Publications, Inc.

Perie, M., Baker, D. P., & Sharon Bobbitt, S. (1997). *Time spent teaching core academic subjects in elementary schools: Comparisons across community, school, teacher, and*

student characteristics. Retrieved from Washington, DC:

https://eric.ed.gov/?id=ED406456

Perle, J. G. (2016). Teacher-provided positive attending to improve student behavior. *Teaching Exceptional Children, 48*(5), 250-257.

Peters, E. E. (2010). Shifting to a student-centered science classroom: An exploration of teacher and student changes in perceptions and practices. *Journal of Science Teacher Education, 21*(3), 329-349.

Peterson, K. D., Wahlquist, C., & Bone, K. (2000). Student surveys for school teacher evaluation. *Journal of Personnel Evaluation in Education, 14*(2), 135-153.

Pitzer, J., & Skinner, E. (2017). Predictors of changes in students' motivational resilience over the school year:The roles of teacher support, self-appraisals, and emotional reactivity. *International Journal of Behavioral Development, 41*(1), 15-29.

Polikoff, M. S. (2015). The stability of observational and student survey measures of teaching effectiveness. *American Journal of Education, 121*(2), 183-212.

Polit, D. F., & Beck, C. T. (2012). *Nursing research: generating and assessing evidence for nursing practice* (Ninth ed.). Philadelphia: Wolters Kluwer Health/Lippincott Williams & Wilkins.

Pressley, M., Raphael, L., Gallagher, J. D., & DiBella, J. (2004). Providence-St. Mel School: How a school that works for african american students works. *Journal of Educational Psychology, 96*(2), 216-235.

Quek, C. G. (2005). *A national study of scientific talent development in Singapore.* (3173568 Ph.D.), The College of William and Mary, Ann Arbor. ProQuest Dissertations & Theses Global database.

Reich, K. (2007). Interactive constructivism in education. *Education & Culture, 23*(1), 7-26.

Rickman, D. (2014). *Race to the top: Georgia's vision for educational excellence*. Retrieved

    from Atlanta: https://www2.ed.gov/programs/racetothetop/state-reported-

    sharing/gaexsumm.pdf

Robertson-Kraft, C., & Zhang, R. S. (2018). Keeping great teachers: A case study on the impact

    and implementation of a pilot teacher evaluation system. *Educational Policy, 32*(3), 363-

    394.

Rowan, B., Fang-Shen, C., & Miller, R. J. (1997). Using research on employees' performance to

    study the effects of teachers on students' achievement. *Sociology of Education, 70*(4),

    256-284.

Rubie-Davies, C. M., Peterson, E. R., Sibley, C. G., & Rosenthal, R. (2015). A teacher

    expectation intervention: Modelling the practices of high expectation teachers.

    Contemporary Educational Psychology, 40, 72-85.

Rubin, H. J., & Rubin, I. S. (2012). *Qualitative interviewing: The art of hearing data* (3rd. ed.).

    Thousand Oaks: SAGE Publications, Inc.

Ryder, R. J., Burton, J. L., & Silberg, A. (2006). Longitudinal study of direct instruction effects

    from first through third grades. *The Journal of Educational Research, 99*(3), 179-192.

Sabers, D. S., Cushing, K. S., & Berliner, D. C. (1991). Differences among teachers in a task

    characterized by simultaneity, multidimensionality, and immediacy. *American*

    Educational Research Journal, 28(1), 63-88.

Sachs, J. (1999). *Teacher professional identity: competing discourses, competing outcomes.*

    Paper presented at the Australian Association for Research in Education (AARE) and the

New Zealand Association for Research in Education (NZARE) Joint Conference, Melbourn, Australia.

Sandilos, L. E., Rimm-Kaufman, S. E., & Cohen, J. J. (2017). Warmth and demand: The relation between students' perceptions of the classroom environment and achievement growth. *Child Development, 88*(4), 1321-1337.

Sawchuk, S. (2016, 2016/01/06/). ESSA Loosens Reins on Teacher Evaluations, Qualifications. *Education Week, 35,* 14.

Schildkamp, K., Poortman, C. L., & Handelzalts, A. (2016). Data teams for school improvement. *School Effectiveness and School Improvement, 27*(2), 228-254.

Schoen, L. T. (2008). Constructing high quality learning environments for twenty-first century learners: A sociacultural constructivist perspective *Teaching and Learning: International Best Practice*. Scottsdale: Information Age Publishing.

School District. (2015). About the School District.

Schroeder, C. M., Scott, T. P., Tolson, H., Huang, T.-Y., & Lee, Y.-H. (2007). A meta-analysis of national research: Effects of teaching strategies on student achievement in science in the United States. *Journal of Research in Science Teaching, 44*(10), 1436-1460.

Schumacher, G., Grigsby, B., & Vesey, W. (2015). Determining effective teaching behaviors through the hiring process. *International Journal of Educational Management, 29*(1), 139-155.

Shang, Y., VanIwaarden, A., & Betebenner, D. W. (2015). Covariate measurement error correction for student growth percentiles using the SIMEX method. *Educational Measurement: Issues and Practice, 34*(1), 4-14.

Sharma, M. B., & Elbow, G. S. (2000). *Use internet primary source to teach critical thinking skills in geography*. 88 Post Road West, Westport, CT: Greenwood Press.

Smail, K. M., & MacDonald, C. (2015). Helping students with a disability meet the national standards and grade-level outcomes. *Journal of Physical Education, Recreation & Dance, 86*(7), 35-39.

Spear-Swerling, L., & Zibulsky, J. (2014). Making time for literacy: teacher knowledge and time allocation in instructional planning. *Reading and Writing, 27*(8), 1353-1378.

Stake, R. (1995). *The art of case study research*. Thousand Oaks: Sage Publications.

Stecher, B. M., Holtzman, D. J., Garet, M. S., Hamilton, L. S., Engberg, J., Steiner, E. D., . . . Chambers, J. (2018). Intensive partnerships for effective teaching enhanced how teachers are evaluated but had little effect on student outcomes. *Rand Corporation, Research Briefs*, 8.

Stecker, P. M., Fuchs, L. S., & Fuchs, D. (2005). Using curriculum-based measurement to improve student achievement: Review of research. *Psychology in the Schools, 42*(8), 795-819.

Steinberg, M. P., & Garrett, R. (2016). Classroom composition and measured teacher performance: What do teacher observation scores really measure? *Educational Evaluation and Policy Analysis, 38*(2), 293-317.

Steinberg, M. P., & Kraft, M. A. (2017). The sensitivity of teacher performance ratings to the design of teacher evaluation systems. *Educational Researcher, 46*(7), 378-396.

Sternberg, R. J. (2003). What is an "expert student?". *Educational Researcher, 32*(8), 5-9.

Stewart, A. R., Scalzo, J. N., Merino, N., & Nilsen, K. (2015). Beyond the criteria: Evidence of teacher learning in a performance assessment. *Teacher Education Quarterly, 42*(3), 33-58.

Strauss, A. C., & Corbin, J. M. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (2nd ed.). Thousand Oaks: Sage Publishing.

Stronge, J. H. (2006). Teacher evaluation and school improvement: Improving the educational landscape *Evaluating teaching: A guide to current thinking and best practice* (2nd ed., pp. 1-23). Thousand Oaks: Corwin Press.

Stronge, J. H. (2007). *Qualities of effective teachers* (2nd ed.). Alexandria: Association for Supervision and Curriculum Development.

Stronge, J. H., & Ostrander, L. P. (1997). Client surveys in teacher evaluation. In J. H. Stronge (Ed.), *Evaluating Teaching: A Guide to Current Thinking and Best Practice*. Thousand Oaks: Corwin Press, Inc.

Stronge, J. H., Ward, T. J., Tucker, P. D., & Hindman, J. L. (2007). What is the relationship between teacher quality and student achievement? An exploratory study. *Journal of Personnel Evaluation in Education, 20*(3-4), 165-184.

Stronge, J. H., & Xu, X. (2015). *Instructional planning for effective teaching*. Bloomington: Solution Tree.

Swap, S. A. (1993). Developing home-school partnerships: From concepts to practice (Vol. 66, pp. 152). New York: Teachers College Press.

Taylor, B. M., Pearson, P. D., Clark, K. F., & Walpole, S. (1999). Center for the improvement of early reading achievement: Effective schools/accomplished teachers. *The Reading Teacher, 53*(2), 156-159.

Titsworth, S., Mazer, J. P., Goodboy, A. K., Bolkan, S., & Myers, S. A. (2015). Two meta-analyses rxploring the relationship between teacher clarity and student learning. *Communication Education, 64*(4), 385-418.

Tomlinson, C. A. (1999). *The differentiated classroom : Responding to the needs of all learners*. Alexandria: Association for Supervision and Curriculum Development.

Tomlinson, C. A. (2001). *How to differentiate instruction in mixed-ability classrooms* (2nd ed.). Alexandria: Association for Supervision and Curriculum Development.

Tomlinson, C. A. (2007). Learning to love assessment. *Educational Leadership, 65*(4), 8-13.

Tomlinson, C. A. (2015). The caring teacher's manifesto. *Educational Leadership, 72,* 89-90.

Tomlinson, C. A., & Moon, T. R. (2013). *Assessment and student success in a differentiated classroom*. Alexandria, VA: ASCD.

Tsai, C.-H., Huang, H.-I., Guo, S.-J., & Chang, F. M.-T. (2007). The study of questioning skills on teaching improvement. *The International Journal of Learning: Annual Review, 12*(8), 141-146.

Turner, J. C., Christensen, A., Kackar-Cam, H. Z., Trucano, M., & Fulmer, S. M. (2014). Enhancing students' engagement: Report of a 3-year intervention with middle school teachers. *American Educational Research Journal, 51*(6), 1195-1226.

Ültanir, E. (2012). An epistemological glance at the constructivist approach: Constructivist learning in Dewey, Piaget, and Montessori. *International Journal of Instruction, 5*(2), 195-212.

US Department of Education. (1983). *A nation at risk: The imperative for educational reform*. Washington, D.C.: US Department of Education.

US Department of Education. (2009). *Race to the top program: Executive summary*. Washington, DC: US Department of Education.

US Department of Education. (2010). *A blueprint for reform: The reauthorization of the elementary and secondary education act*. Washington, D. C.: US Department of Education.

US Department of Education. (2012). *ESEA flexibility*. Washington, DC: US Department of Education.

US Department of Education. (2013). *Race to the top Georgia report year 2: School year 2011–2012*. Retrieved from Washington, D.C.:

US Government Accountability Office. (2013). *Race to the top: States implementing teacher and principal evaluation systems despite challenges*. (GAO-13-777). Washington, D. C.: US Government Accountability Office.

Viteritti, J. P. (2012, 2012/06//). The federal role in school reform: Obama's "race to the top". *Notre Dame Law Review, 87,* 2087+.

Waldrip, B., Yu, J. J., & Prain, V. (2016). Validation of a model of personalised learning. *Learning Environments Research, 19*(2), 169-180.

Walker, M. H. (1998). 3 basics for better student output. *The Education Digest, 63*(9), 15-18.

Wallace, T. L., Kelcey, B., & Ruzek, E. (2016). What can student perception surveys tell us about teaching? Empirically testing the underlying structure of the tripod student perception survey. *American Educational Research Journal, 53*(6), 1834-1868.

Wang, M. C., Haertel, G. D., & Walberg, H. J. (1993). What helps students learn? *Educational Leadership, 51*(4), 74.

Weisberg, D., Sexton, S., Mulhern, J., & Keeling, D. (2009). The Widget Effect. *The Education Digest, 75*(2), 31-35.

Weiss, I. R., & Miller, B. (2006, October 4-5, 2006). *Deepening teacher content knowledge for teaching: A review of the evidence.* Paper presented at the MSP Evaluation Summit II, Minneapolis, MN.

Weiss, I. R., Pasley, J. D., Smith, P. S., Banilower, E. R., & Heck, D. J. (2003). *Highlights report, looking inside the classroom: A study of K—12 mathematics and science education in the United States*. Retrieved from Chapel Hill, NC: http://www.horizon-research.com/insidetheclassroom/reports/looking/complete.pdf

Wenglinsky, H. (2000). *How teaching matters: Bringing the classroom back into discussions of teacher quality*. Retrieved from Princeton: https://www.ets.org/research/policy_research_reports/publications/report/2000/idxn

Wenglinsky, H. (2002). How schools matter: The link between teacher classroom practices and student academic performance. *Educational Policy Analysis Archives, 10*(12), 30.

Wenglinsky, H. (2004). Closing the racial achievement gap: The role of reforming instuctional practices. *Education policy analysis archives, 12*, 64.

Wiggins, G., & Wilbur, D. (2015). How to make your questions essential. *Educational Leadership, 73*(1), 10-15.

Wilkerson, D. J., Manatt, R. P., Rogers, M. A., & Maughan, R. (2000). Validation of student, principal, and self-ratings in 360º feedback. for teacher evaluation. *Journal of Personnel Evaluation in Education, 14*(2), 179-192.

Will, M. (2017). Assessing quality of teaching staff still complex despite ESSA's leeway; States are all over the map when it comes to how they're looking to approach teacher-evaluation systems under ESSA. *Education Week, 36,* 31.

Williams, R. T., Swanlund, A., Miller, S., Konstantopoulos, S., Eno, J., van der Ploeg, A., & Meyers, C. (2014). Measuring instructional differentiation in a large-scale experiment. *Educational and Psychological Measurement, 74*(2), 263-279.

Woods, R. (2018). *Georgia Department of Education teacher keys effectiveness system: Implementation Handbook*. Atlanta: State of Georgia.

Worley, D., Titsworth, S., Worley, D. W., & Cornett-DeVito, M. (2007). Instructional communication competence: lessons Learned from award-winning teachers. *Communication Studies, 58*(2), 207-222.

Worrell, F. C., & Kuterbach, L. D. (2001). The use of student ratings of teacher behaviors with academically talented high school students. *Journal of Secondary Gifted Education, 12*(4), 236.

Xu, X., Grant, L. W., & Ward, T. J. (2016). Validation of a Statewide teacher evaluation system:Relationship between scores from evaluation and student academic progress. *NASSP Bulletin, 100*(4), 203-222.

Yell, M. L., Katsiyannas, A., & Shiner, J. G. (2006). The no child left behind act, adequate yearly progress, and students with disabilities. *Teaching Exceptional Children, 38*(4), 32-39.

Yin, R. K. (2014). *Case study research: Design and methods* (Fifth ed.). Thousand Oaks: SAGE Publishing.

Yoon, K. S., Duncan, T. L., Wen-Yu, S., Scarloss, B., & Shapley, K. L. (2007). Reviewing the evidence on how teacher professional development affects student achievement. *The Regional Educational Laboratory - Southwest, 2007*(No. 033), 62.

Ysseldyke, J., & Bolt, D. M. (2007). Effect of technology-enhanced continuous progress monitoring on math achievement. *School Psychology Review, 36*(3), 453-467.

Zahorik, J., Halbach, A., Ehrle, K., & Molnar, A. (2003). Teaching practices for smaller classes. *Educational Leadership, 61*(1), 75-77.

Zuiker, S., & Whitaker, J. R. (2014). Refining inquiry with multi-form assessment: Formative and summative assessment functions for flexible inquiry. *International Journal of Science Education, 36*(6), 1037-1059.

APPENDICIES

APPENDIX A

Liberty University IRB Approval

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

March 14, 2016

Linda Rogers
IRB Approval 2356.031416: The Impact of Teacher Effectiveness on Student Achievement:
A Multi-Case Study

Dear Linda,

We are pleased to inform you that your study has been approved by the Liberty IRB. This approval is extended to you for one year from the date provided above with your protocol number. If data collection proceeds past one year, or if you make changes in the methodology as it pertains to human subjects, you must submit an appropriate update form to the IRB. The forms for these cases were attached to your approval email.

Thank you for your cooperation with the IRB, and we wish you well with your research project.
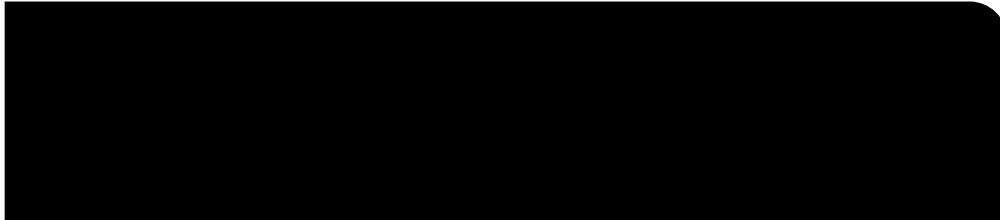
Sincerely,

Administrative Chair of Institutional Research
The Graduate School

LIBERTY
UNIVERSITY.
Liberty University | Training Champions for Christ since 1971

APPENDIX B

School District Approval Letter to Conduct Research Study

October 23, 2014

Ms. Linda Rogers
2156 Clementine Drive
Marietta, GA 30066

Dear Ms. Rogers:

Your research project titled, **Teacher Perceptions on the Impact of Teacher Effectiveness on Student Achievement: A Case Study**, has been approved. Listed below are the schools where approval to conduct the research is complete. Please work with the school administrator to schedule administration of instruments or conduct interviews.

School

Should modifications or changes in research procedures become necessary during the research project, changes must be submitted in writing to the Office of Accountability & Research prior to implementation. At the conclusion of your research project, you are expected to submit a copy of your results to this office. Results cannot reference the ████████████████ or any District schools or departments.

Research files are not considered complete until results are received. If you have any questions regarding the process, contact our office at ████████████

Sincerely,
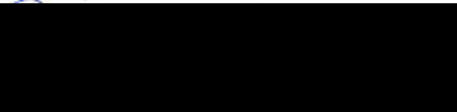
Manager, Research & Grants Administration
Office of Accountability & Research

APPENDIX C

Consent Form

Applicant Agreement: Access to Confidential Data

Research Applicant_____

Research Project_____

Home Address_____

City/State/Zip_____

Employer_____

Telephone: Work_____   Home_____

              Fax_____   Email_____

I understand that any unauthorized disclosure of confidential information is illegal as

provided in the Family Educational Rights and Privacy Act of 1973 (FERPA) and in the

implementing federal regulations found in 34 CFR Part 99. I understand that participation in a

research study by students, parents, and school staff is strictly voluntary.

In addition, I understand that any data, datasets or outputs that I, or any authorized

representative, may generate from data collection efforts throughout the duration of the research

study are confidential and the data to be protected. I will not distribute to any unauthorized

person any data, reports that I have access to, or may generate using confidential data. I also

understand that students, schools, or the district may not be identified in the research report. Data

with names or other identifiers (such as student numbers) will be disposed of when their use is complete.

I also understand that approval does not constitute commitment of resources or endorsement of the study or its findings by the school system or by the Board of Education.

If the research project is approved, I agree to abide by standards of professional conduct while working in the schools. I understand that failure to do so could result in termination of the research study.

I agree to send a copy of the study results to the Curriculum, Instruction & Assessment Division after completion of the study for any future use to the school district.

_____   _____

Research Applicant Signature   Date

_____   _____

Signature of Staff Sponsor of Research Project   Date

_____   _____

Name of Sponsoring University   Phone Number

██████████████████████████

APPENDIX D

Semi-Structured Open-Ended One-to-One Interview Questions

- What are some ways that you have added relevancy to the curriculum and helped students make real-world connections?

- How do you display an understanding of the intellectual, social, emotional and physical development of the student age group?

- How do you get to know the individual learner regarding their learning abilities, prior achievement, cultural background and personal interests?

- How do you create an environment in which individual differences in ability, culture, academic needs and interest are respected to impact student achievement?

- How do you plan for the different needs of your students?

- How do you plan for a learner-centered environment that allows for student-choice, flexibility and independence?

- How do you integrate technology into instruction?

- How do you develop appropriate unit and daily plans?

- What is an example of a research-based strategy you have used to successfully engage students?

- In what ways do you use technology to promote a higher-level of learning?

- How do you stress student responsibility and accountability in mastery of the standards?

- How do you incorporate wait time along with purposeful questioning to reach higher order thinking skills?

- How do you offer multiple modes of learning for students through their learning style preference?

- How do you use flexible grouping to encourage peer interaction and to accommodate student needs?

- How do you provide remediation, enrichment and acceleration to further increase student learning of the material?

- Describe how you provide students with choices regarding the method to express the required learning.

- How are you using assessment data to plan your lesson or unit plans?

- How do you differentiate based on diagnostic data?

- How are you using formative assessments to adjust instruction?

- How often do you give homework and do you offer feedback on the homework?

- How do you use diagnostic assessment data to develop learning goals for students?

- How do you monitor students and use various types of data to assess student needs?

- How do you teach students to self-assess and to use metacognitive strategies in support of lifelong learning?

- How do you interpret and make inferences from data of teacher made assessments and standardized assessments regarding student progress toward mastery of the standards?

- How do you create a warm and respectful learning environment?

- How do you show that you value what students say?

- Describe interesting activities that you have implemented that increase student engagement and minimize disruption.

- How do you implement classroom rules of behavior fairly and consistently?

- How do you handle situations where students finish instructional tasks at different rates?

- What strategies do you use to get the class started without wasted time?

- How do you communicate high expectations for all learners?

- How do you design challenging but achievable tasks that are relevant to student's lives, experiences, or current events?

- What has been the most powerful professional learning experience this year?

- How have you been involved in the school improvement process this year?

- In what ways has your professional practice been influenced by the school improvement plan?

- Describe your professional reflective practices.

- How do you determine the best method for contacting parents?

- How do you use verbal and nonverbal communication to foster positive interactions and to promote learning in the classroom?

- Describe how you listen and respond with cultural awareness with students, parents, colleagues and community stakeholders?

- How do you create an open, warm and communicative climate in the classroom that invites student questions, comments and responses?

APPENDIX E

Semi-Structured Open-Ended Focus Group Interview Questions:

Standard 1.

- How do you implement student's use of higher-level thinking skills in your instruction?

- What are some ways that you have worked with colleagues this year to ensure that there has been fairness across the course that you teach in different classrooms?

- What are some ways that you added relevance to the curriculum and helped students make real-world connections?

Standard 2.

- How do you plan for the different needs of your students?

- Describe a variety of activities that you use to engage students?

- How do you plan lesson and unit plans and how do you adapt your plans as needed?

Standard 3.

- In what ways do you use technology to promote higher-order thinking skills?

- How have you created or used rubrics to communicate expectations?

- How do you stress student accountability in mastery of the content?

Standard 4.

- How do you use technology to differentiate instruction?

- What is your process to determine grouping of students?

- How do you use data to support grouping practices?

Standard 5.

- How are you using assessment data to plan your lessons?

- How are you using formative assessments to adjust instruction?

- How does the data from summative assessment inform your future instruction?

Standard 6.

- How do you use assessment data to plan instruction based on student sub group needs?

- How do you identify a student in need of additional or different forms of instruction?

- How often do you provide constructive feedback to students on their progress toward mastery of the standards?

Standard 7.

- How do you create a warm and caring learning environment?

- What are some examples of ways that you make connections with your students?

- How do you recognize and celebrate diversity in your classroom?

Standard 8.

- How do you link learning to student's real life experiences?

- How do you set high expectations for strong academic performance for all students?

- How do you develop and implement questions that reflect higher-order cognitive skills?

Standard 9.

- How have you been involved in the school improvement plan this year?

- How do you incorporate professional development activities into your classroom practice?

- How do you reflect upon your professional practice?

Standard 10.

- How do you encourage an open communicative environment that invites student's questions, comments and suggestions?

- How do you reach out to parents who have social, racial, economic and or language barriers?

- How do you create a climate of accessibility with your students and parents?

APPENDIX F

Teacher Observations/Formative Assessment Tool

Teacher: _____School:_____

Grade/Subject: _____Date:_____

1. Professional Knowledge:
   Overall Rating:
   _____Exemplary
   _____Proficient
   _____Needs Improvement
   _____Ineffective

   Specific Comments:

2. Instructional Planning:
   Overall Rating:
   _____Exemplary
   _____Proficient
   _____Needs Improvement
   _____Ineffective

   Specific Comments:

3. Instructional strategies:
   Overall Rating:
   _____Exemplary
   _____Proficient
   _____Needs Improvement
   _____Ineffective

   Specific Comments:

4. Differentiated Instruction:
   Overall Rating:
   _____Exemplary

_____Proficient
_____Needs Improvement
_____Ineffective

Specific Comments:

5. Assessment Strategies:
  Overall Rating:
  _____Exemplary
  _____Proficient
  _____Needs Improvement
  _____Ineffective

  Specific Comments:

6. Assessment Uses:
  Overall Rating:
  _____Exemplary
  _____Proficient
  _____Needs Improvement
  _____Ineffective

  Specific Comments:

7. Positive Learning Environment:
  Overall Rating:
  _____Exemplary
  _____Proficient
  _____Needs Improvement
  _____Ineffective

  Specific Comments:

8. Academically Challenging Environment:
  Overall Rating:
  _____Exemplary
  _____Proficient
  _____Needs Improvement
  _____Ineffective

  Specific Comments:

9. Professionalism:
    Overall Rating:
    _____Exemplary
    _____Proficient
    _____Needs Improvement
    _____Ineffective

    Specific Comments:

10. Communication:
    Overall Rating:
    _____Exemplary
    _____Proficient
    _____Needs Improvement
    _____Ineffective

    Specific Comments: