THE IMPACT OF STANDARDS-BASED GRADING ON STUDENT ACHIEVEMENT AND SELF-EFFICACY IN MIDDLE SCHOOL ELA CLASSES

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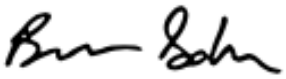

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Abstract

The purpose of this study was to investigate the impact that standards-based grading practices had on student achievement and self-efficacy in ELA classes within a middle school level. The sample population for this study was two schools educating fifth through eighth grade students in rural southeastern Tennessee. The study used student performance data from the Practice Test of the TN Ready State Assessment in English Language Arts for sixth and seventh grade students only. It also included a brief questionnaire survey collected from the *Motivational Strategies Learning Questionnaire (MSLQ),* which measured self-efficacy. The entire survey was given, but only eight questions were chosen to report data on because those eight dealt specifically with academic self-efficacy.

Albert Bandura, a well-known learning theorist, found that a student's level of motivation can have significant impacts on student achievement. Motivation is a very important determining factor of how students will perform on assessments based on the way the test is graded and the level of self-efficacy students possess when attempting a test. The hypotheses stated that students who received standards-based grading would increase achievement and their rating on the self-efficacy scale, as compared to those students who did not receive standards-based grading with the thought the control group's self-efficacy scale would either stay the same or demonstrate only a slight increase. The results of this experimental study have added to the existing research on the use of standards-based grading with middle school students and the impact it has on student achievement as well as self-efficacy. The results revealed that there was a significant difference between the two groups. The treatment group that received standards-based grading showed that students were impacted greater on their student achievement and self-efficacy than the control group that received traditional grading.

Dedication

My engagement in the doctoral program has been an invigorating, grueling, arduous, and rewarding experience with the interdependence of passion and persistence. I could not have succeeded without the support and inspiration from a number of people. For each of you, I am forever grateful.

I would like to dedicate this dissertation to my Lord and Savior, Jesus Christ. He has helped me so many times as I have been heavily burdened with the stresses of this process, but He brought me through and lifted me up to continue my journey. I prayed fervently as I neared the last steps of the process and He has answered my prayers like He has done on so many occasions. Without Him, I would not have succeeded!

Next, I want to thank my family for their continued support and many sacrifices they faced as I began, proceeded, and completed the dissertation program. My husband Russell and my daughter Olivia never gave up on me and offered me endless encouragement to lift my spirit during the long and tiresome nights and weekends of working. This is also dedicated to my loving and supportive parents, Philip Fults and Peggy Cash, without whom I am sure I would have never made it through this or the many other endeavors in my life. I was blessed to be raised in a home where education was made a priority. My parents have sacrificed so much to help make this dream a reality and I hope I have not disappointed them.

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I serve as their administrator, I want to thank them for being willing to take on extra tasks or jobs that seemed overwhelming to me at the time and reassuring me that everything would come together and be fine. I have so many personal friends I could mention who allowed me to vent my frustrations, cry on their shoulders, and gave me a much-needed hug on many stress-filled evenings. Thanks for showing me love, understanding, and support on this journey. They are much more than my friends; they are part of my family. For the teachers who agreed to participate in this study, Natalie Burkard, Kayla Brown, and Kirsten Long, I will be forever in your debt. I know how much you worked and the time you gave in order to help me reach success, and I will forever be grateful to you.

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My district supervisors allowed me the support I needed by encouraging me and giving me the permission needed to conduct the study in two of the district schools in our county. They gave me the confidence I needed to complete and defend this study.

I would also like to thank my reader and editor, Dr. Cindy Vassar. She agreed to commit to the time necessary to make the corrections and fulfill the requirements on all the technical and mechanical side of things. She was a blessing and helped me fulfill my responsibilities until the very final chapters were complete. She was swift and knowledgeable about all things APA and was so valuable to me when I was on such a tight schedule.

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CHAPTER ONE

Introduction

Background of the Study

Grading in middle schools traditionally has been based on a letter grade system or with number grades assigned to a letter grade percentage. Traditional grading practices have been used for over one hundred years, and to date, there has been some research and reports to support it (Townsley & Buckmiller, 2016). Over this extended period of grading practices, a student's grade was determined by the teacher to whom the student was assigned and that teacher's subjective approach to grading. Most teachers have not received sufficient training in reliable and valid assessment methods during their teacher preparation and often default to the way they saw their former teachers use grades when they were in school. As a result, grading practices have varied widely from teacher to teacher based on style, preference, and opinions and without a research-driven rationale (Guskey, 2001).

Parents of students today were also graded using traditional methods and thus this seemingly inconsistent way of communicating achievement and growth of students has been entrenched and accepted in the way society thinks about schooling (Brookhart & Nitko, 2008). The use of *standards-based grading (SBG)* has become a trend used by more elementary schools over the last ten years. As schools continue to adopt a standards-based approach to teaching, learning, and assessment, it is critical to acknowledge that researchers have called for a greater understanding on the topic (Gietschier-Hartman, 2015).

There are unspoken risks that have been taken with traditional grading systems. Students may have not been acquiring the knowledge, skills, and understandings to be successful in

further study because of inflated grades and/or a hyper focus on grades overriding that of genuine learning. Others still may have had lower grades because of behaviors such as late work, chronic absenteeism, or non-compliance. The risk of miscommunicating student proficiency levels has increased over the last fifteen years within the traditional grading system. If grades are going to be meaningful, they need to provide accurate information (Hillman, 2016).

During the last two decades with an ever-increasing number of students attempting to enroll and complete college, society has placed a greater emphasis on grade awareness with a focus on the true mastery of skills and its impact on student self-efficacy (Artino, 2012). Students must achieve at higher levels in order to effectively compete for scholarships to get into college by being awarded helpful financial aid. Grades are associated with many competencies and successes. Students develop feelings of lower self-efficacy when they receive lower grades, thus at times teachers have inflated the grades by methods attributed to attendance, class participation, or extra credit. Teachers feel compelled to inflate grades at times especially for students who fall into at-risk categories (Betts, 1998).

When examining the differences in schools that use traditional grading versus that of standards-based grading, it is important to distinguish the many differences between the two grading practices. Standards-based grading provides information on student mastery of content and skills within the strands, standards, and indicators of the established curriculum and inform students of their progress along a continuum of proficiency. Research has clearly identified the positive impacts of the best practices that have been utilized in standards-based grading such as: administering formative and summative assessments; providing students with timely feedback; posting standards and expected outcomes for lessons and activities; and continually providing opportunities to master concepts and skills (Guskey & Swan, 2011).

In urban and suburban school districts, there has been a push in the past decade to move toward a more standards-based grading technique due to the overhaul of many state standards to meet a more universal set of objectives measured on a nationally normed assessment instead of regional or local assessments (Burleson, 2013). The district in which this researcher's study was conducted had been weighing the advantages and disadvantages of transitioning from the traditional grading practices to one with more standards-based practices for five years prior. Normally, rural school districts have been less likely to try new ideas, especially those associated with grading practices due to factors such as public rejection, parental concern, lack of understanding by students, and the hesitation to make a policy change in the local politically charged educational arena (Cox, 2011).

Research Problems

According to surveys over the last three years, most teachers and leaders want to utilize grading techniques that accurately reflect applicative or conceptual student learning, as opposed to rote or recall learning (Hanover Research, 2015). This allows teachers to know exactly where their students are succeeding and struggling.

The goal of the standards-based grading system is to prioritize learning over "the usual summation of grades earned during the learning process" (Thieman, 2000). The transition to standards-based grading has allowed elementary schools to have many opportunities to examine the expectations that teachers, students, and families have for the type and quality of student work in each subject.

Because standards-based grading is a relatively new concept at the middle school level, (just about ten years old from its first experiments in middle school) few teachers in rural school

systems have ever experienced such a system when they were students in school (Gietschier-Hartman, 2015).

Teachers and parents have often confused the terms criterion-based and standards-based assessments and grading. A variation of criterion-referenced testing is *standards-referenced testing* or *standards-based assessment.* Many states and districts have adopted *content standards* (or curriculum frameworks) which describe what skills students should have acquired in different subjects at various grade levels. *Performance standards* define how much of the content standards students should know to reach the basic, proficient, or advanced level in the subject area. Tests are then based on the standards with the results reported in terms of these levels, which, of course, represent human judgment and can reveal bias or error.

In some states, performance standards have been steadily increased, so that students continually must know more to meet the same level. Because teacher expectations are heavily shaped by their own experiences as students, it has been difficult for some teachers to understand and implement standards-based grading in their classrooms (Dweck, 2014). Attention to criteria is what separates standards-based grading from other forms of grading; criteria help teachers determine whether or not standards have been met (O'Connor, 2009).

By having clear criteria measures for success, teachers and students build shared understanding of what it actually means to master a learning target and have a clear roadmap for improvement when the standard is not yet met. In most middle schools, this shared understanding does not yet exist. Although teachers believe in the standards-based grading system in theory, implementing it requires sophistication and commitment above and beyond the expectations of many schools (Pepperl & Lezotte, 2003).

This study examined how students responded to the teachers' use of standards-based grading during their regular curriculum studies in ELA and whether teachers noticed a marked impact regarding student self-efficacy during this study, whether by marked increases, stagnant stages, or significant decreases. Teachers who personally witness the benefits of using SBG in their classrooms may be more willing to invest the extra preparation and planning to address students' needs and reap the academic rewards at the end of the process.

This study focused on the use of standards-based grading in middle school grade English Language Arts (ELA) and the possible impact it had on student achievement and student self-efficacy toward the subject or content area. Students in sixth and seventh grade completed a pretest on the grade-level standards in their ELA classes. They also completed a self-efficacy questionnaire regarding their perceptions about their own performance and abilities. The results were recorded by the ELA teachers.

Both middle schools had a similar socio-economic rate for students around 65% qualifying for free or reduced lunch based on household income. The teachers responsible for instruction of the ELA curriculum in these two grade levels were identified as veteran teachers with more than eight years of experience. After a four-week instructional period, a posttest was administered to measure their students' performance on the ELA standards again as well as the same self-efficacy questionnaire to determine if their perceptions had changed during this four-week grading period. The same pretest, posttest and self-efficacy questionnaires were given to middle school students in the same grade level with similar demographics to the study or treatment group.

The teachers involved in the study were provided the same instructions, curriculum and standards; furthermore, these veteran teachers were equally qualified with similar years of

experience and highly qualified status. A comparison was conducted to determine if there was significant difference in student achievement and the scales of self-efficacy. This study hoped to spark more district interest into examining how utilizing standards-based grading can impact student achievement and their feelings of self-efficacy at the middle school level.

Purpose of the Study

The purpose of this study was to investigate the impact that standards-based grading practices had on student achievement and self-efficacy in ELA classes within a middle school level. Standards-based report cards provide information regarding student mastery of content and skills within the strands, standards, and indicators of the established curriculum (Marzano, 2006).

Extensive research projects have been conducted on the powerful impact of standards-based practices on student self-efficacy and motivation (Guskey, 2001). The impetus for introducing a standards-based reporting system to stakeholders was the need to improve student achievement. Families, students, and teachers remain entitled to quantitative evidence that the effort expended to develop and implement standards-based report cards is producing positive results for student performance and growth (Guskey & Swan, 2011).

Some school leaders, families, and educators recognize that the traditional reporting tools that have been used for the past century to report student progress provide minimal representation of student achievement. The adoption of standards-based report cards and grading practices has gained increasing momentum in recent years. However, in many towns and cities, parents, community members, teachers, and students object to plans to alter what is viewed as a sacred institution - the easily recognized, but often inaccurate portrayal of student achievement as A’s and B’s on traditional report cards and assessment pieces (Dublin, 2014). While about 44% of elementary schools, K-4, in the state of Tennessee has adopted standards-based report

cards, few middle or secondary schools have embarked on the process (Tennessee Department of Education, 2016).

As district leaders consider facilitating this cultural shift from traditional grades to performance levels at the middle school, confirmation that the change will build stronger student performance over time will assist them in convincing stakeholders that this paradigm shift is worth the time, effort, and resistance. The intellectual goal of the dissertation study was to examine the potential effect of standards-based report cards on the growth and performance of students' level of achievement and feelings of self-efficacy.

As with any study, there are opposing views to consider. There are many advocates for continuing the use of traditional grading procedures in the school setting. Some pros that continue to emerge when examining the literature surrounding grading practices include (a) a traditional grading scale is universally recognized; (b) virtually everyone knows that earning an A is good while earning an F is associated with failure; (c) the traditional grading scale is easy to interpret and understand; (d) the simplistic nature of the system makes it user-friendly for teachers, students, and parents; (e) the traditional grading scale allows for a direct comparison from one student to another within a specific class (Crooks, 1988). For example, a student with an 88 in a 7th-grade ELA class is performing better than another student with a 62 in the same class.

Educators in elementary schools and middle schools prepare students for high school. College prep high schools prepare students for higher education. One argument is the idea that students need to experience letter grades so that they are better prepared for grades at the next level (Cross, Lawrence, Frary, & Robert, 1996). While research has shown advantages to the use of SBG, there are also advantages of the traditional grading system.

It is easy to understand why traditional grades are readily accepted in society. Traditional grades can motivate students, especially students who strive to please the adults in their lives. The secondary and post-secondary levels use the traditional grading system, so by adopting the traditional letter or number grade system, it can provide continuity at the next level of education.

Hypotheses

The research study sought the validity of these hypotheses:

1. Standards-based grading methods that provide feedback to families and students regarding their progress along a continuum sustain higher motivation toward attainment of proficiency more than traditional grades; therefore, students attain a higher level of ELA achievement on state assessments.
2. Students who receive grades based on standards-based reporting will have a higher rating on self-efficacy scales than students who receive traditional grading in ELA classrooms.

Research Questions

The following two research questions were addressed in the study:

1. Did the use of standards-based grading impact student achievement in ELA classes of middle school students in grades six and seven?
2. How did the implementation of standards-based grading practices into sixth and seventh grade ELA classes impact students' feelings of self-efficacy?

Rationale for the Study

The data collected from this study will add to the existing body of pedagogical knowledge regarding the impact of standards-based grading at the middle school level and the impact on students' self-efficacy, particularly in ELA core classrooms located in rural areas.

Over the last few years, educational leaders have responded to prior research by articulating clear standards for each grade level and assessing students' mastery toward those standards (Wormeli, 2006). With revised curriculum standards clearly articulated and assessment procedures to measure those standards well established, educational leaders implemented the next step and developed standards-based report cards and grading.

Standards-based grading represents performance along a continuum of mastery levels as well as a continuum of standards and/or benchmarks. The effective feedback of standards-based grading informs the child of his progress, puts him in charge of his own learning and facilitates ownership of that progress. These essential elements of standards-based report cards build a foundation of self-efficacy (Schunk & Meece, 2012).

There has been much research and various studies of the impact of using standards-based grading with elementary students, but only a small amount dedicated to the study with preadolescents and adolescents in middle and high schools. Therefore, this study adds yet another perspective of the impact standards-based grading has on student achievement and self-efficacy in the context of a middle school population of an ELA class in a rural, socioeconomically-disadvantaged community.

Researcher Background

As a principal, and a former elementary and middle school teacher, the researcher witnessed how standards-based grading positively impacted student achievement at the elementary levels of K-4. The researcher, however, noticed when the elementary level students made the transition to middle school, two things seemed to occur. First, the students started losing self-confidence and really feared failure which led to lower feelings of self-efficacy. Secondly, the transition to the middle school also brought the change in grading policy from

standards-based grading to traditional grading with number and letter grades. These observations and experiences led the researcher to believe in the implementation of standards-based grading at the middle school level.

Because the transition to middle school is so difficult, the implementation of SBG at the middle school level could potentially ease the transition and make it less overwhelming and difficult for students. These experiences also lead to the opportunity to explore the possibilities of success and increased confidence for students at the middle school level by implementing standards-based grading.

Theoretical Framework

The underlying theory is that feedback provided via standards-based grading will improve self-efficacy and increase motivation, thereby resulting in proximal development and achievement. The increased opportunities to learn within the zone of proximal development might be attributed and show evidence by expanded growth and improved performance on cognitive tasks and assessments.

This research project was grounded in the theory that (a) providing an achievable goal via the grade level content standards and indicators, (b) removing designations of failure, and (c) informing students of their progress along a continuum, all promote self-efficacy and motivation, and provide opportunities for students to learn in a zone of proximal development, and result in improved academic performance and growth (Hanover Research, 2015).

The social cognitive theory, posited by Albert Bandura, explained that people learn their behaviors by observations within social settings (Bandura, 1986). This theory is primarily related to the ways students perceive their abilities and strive to succeed based on their own motivational status (Bandura, 1994). It has given rise to a deeper understanding of how humans develop their

individual beliefs of their own capabilities to succeed. He coined the term “self-efficacy” and explained it as a person’s perception of his ability to accomplish difficult tasks (Bandura, 1994). Specifically, self-efficacy is defined as “people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives” (Pajares & Urdan, 2006; Bandura, 1994, p. 119).

Self-efficacy and motivation have been instrumental in understanding the metacognitive influences that contribute to individual success. As many teachers find it increasingly difficult to motivate their students to be more autonomous with their own academic progress, studies have increasingly focused on ways to build self-efficacy and why it should be pursued in the educational setting (Bandura, 2001). Bandura further explained that an individual’s personal self-efficacy plays a very important role in shaping his personality and behavioral traits, which then directs his intrinsic motivational habits. These habits in turn influence a person’s degree of accomplishment as it pertains to certain tasks.

Various studies have shown the value of self-efficacy as a predictor of college and career readiness. For example, an individual that possesses a high level of self-efficacy will be more inclined to make a commitment to finish difficult tasks because they see them as something to master and overcome rather than as a road block. Contrarily, an individual with low self-efficacy will have the opposite reaction to arduous tasks; perceiving them as chasms that they cannot cross (Schunk & Meece, 2006).

Building a strong self-efficacious mindset in adolescents is the key to building students that are more likely to achieve higher academic performance and meet their set goals (Bandura, 1986). Bandura suggested that self-efficacy is developed over time as children mature into adults and their social-cognitive skills evolve (Schunk & Meece, 2006). The four broad activities that

can help to build self-efficacy beliefs are (a) opportunities for performance accomplishments (mastery experiences), (b) opportunities to observe someone else similar to ones own abilities accomplishing tasks (vicarious experience), (c) persuasion by others to complete a task, and (d) the ability to control one's physiological state in order to maintain an optimistic outlook (Moesgaard-Kjeldsen, 2014). All four of these activities are facilitated by implementing a standards-based grading system. Teachers who have practiced these activities have determined that adolescents are more encouraged, and consequently are more likely to build higher self-efficacy (Betts, 1998).

Of the four activities that help build self-efficacy, mastery experiences have shown the greatest effect with peer/mentor persuasion and vicarious experience coming in close behind (Bandura, 1994). Logically, when students have positive experiences with difficult tasks and manage to master those tasks, they would begin to build the confidence they need to persist with continued growth.

Over time, as a student has more and more mastery experiences and his confidence grows, he develops a growth mindset that is conducive to long-term goal planning and persistence toward goal accomplishment. Standards-based grading procedures have the tendency to help foster these beliefs in students. Carol Dweck, (2013) emphasized that in a *fixed mindset*, people believe their basic qualities, like their intelligence or talent, are simply fixed traits. They spend their time documenting their intelligence or talent instead of developing them. They also believe that talent alone creates success—without effort. Individuals with a growth mindset, on the other hand, believe that effort or training can change one's qualities and traits. A student who possesses a growth mindset attributes success to learning. Therefore, the individual is not terrified of failure, because it only signals the need to pay attention, invest effort, apply time to

practice, and master the new learning opportunity. They are confident that after such effort they will be able to learn the skill or knowledge, and then to improve their performance (Dweck, 2014).

Conceptual Framework

The conceptual framework for this study was established on the assumption that providing students with effective feedback through standards-based report cards results in improved student learning. Providing ongoing feedback to students about their learning helps them see and understand the path they will need to follow to achieve proficiency in knowledge and skills. Richard Stiggins (2005) described how students become partners in the learning process because they are equipped to monitor where they are and how they can work toward the next level. Consequently, students take more active roles in recognizing their levels of learning and communicating their understanding to teachers and families.

Student learning goals depicted on standards-based grading and report cards are intended to indicate what students should know and be able to do at each of the grade levels or grade spans across their educational experience. The use of standards-based report grading enables teachers, students, and parents to track success continually (Marzano, 2003). Students receive a grade or performance level within the standard or strand that is being taught on periodic assessments throughout the school year. The report itself can take the form of age- or grade-appropriate expectations expressed in benchmarks, complete standards, open-ended statements, or abbreviated focal points (Salend, 2005). Guskey (2004) has maintained that standards-based grading most accurately accounts for what students know at a particular time and are able to do when asked at a given time.

Aidman, Gates, and Deterra Sims (2001) have supported the tenet that parents who receive a standards-based report in reference to their children indicate that the grading procedure shows them what their students specifically know and can do. The documentation of mastery of specific skills in reading and math particularly has been a focal point of standards-based grading. As reported by each of these studies, accurate reporting of mastery is essential information for parents and students, given the high-stakes accountability measures mandated by No Child Left Behind (2001) in reading, math, and science. Standards-based reports provide specific information about student progress but may take many different forms.

As stated in recent research studies (Brookhart, 2008) about the use of SBG in classrooms, it has been noted that teachers are resistant to using SBG in part due to their lack of training or by only having a partial understanding of how it can be effectively and efficiently implemented into their classrooms. If teachers become adequately trained and fully understand the benefits to using SBG and the positive impact it may have on their students, they will become more receptive to trying it.

Benjamin Bloom's concept of "mastery learning" has been studied and practiced since he first coined the phrase from his own research in 1968 (Bloom, 1968). He stated if teachers divide learning goals into small chunks or units and periodically use formative assessments to gauge the level of mastery students are achieving, then nearly all students will have an equal opportunity to master the standards being taught (Guskey, 2009). When Bloom conducted his research, he noticed that students who were taught using the mastery learning strategies were more likely to achieve regardless of where they started from.

In order to be successful, some key instructional components must be followed. First, teachers must pre-plan the standards or skills to be taught into smaller units that will make it

more easily organized for student understanding. Secondly, teachers must administer students a pretest in order to establish a baseline for students. After a few lessons the teacher must then administer a formative assessment that will be used to measure how much progress is being made by each student. These assessments are only meant to inform teachers of students' strengths and weaknesses, not used to assign grades for standards taught. Teachers should then individualize each student's learning with corrective lessons to improve upon his weaknesses. After a given length of time students will take another formative assessment that measures how much they have learned from the corrections, and whether they have mastered the learning objectives for the unit (Bloom, 1968; 1974). This cycle is continued until all students have mastered the standards being taught for the unit.

Bloom's study showed that when mastery learning techniques were used, the bell curve for summative assessments within the class shifted illustrating more A's and B's earned rather than the traditional bell curve that typically would have the majority of student's scoring in the C range.

Mastery experiences can occur in a variety of ways but essentially this happens when students have the chance to experience their own accomplishments on difficult tasks or challenges (Artino, 2012). A particular strategy that can be used to build mastery experiences and self-awareness for students is self-assessment.

Benjamin Bloom described how self-assessment techniques encourage students to take the time to judge the quality of their own work and assess their own progress toward meeting expected goals. The key to any type of self-assessment is to make the student the center of their own scoring and progress using well-crafted scoring guides (Bloom, 1968). This is necessary in order to allow students the opportunity to experience the self-acknowledgement of

accomplishing difficult tasks and mastering difficult standards. The more often a student has these types of experiences, the more self-confident he becomes about his own ability to achieve, and the more resistant a student becomes to the damaging effects that failures can have on individuals with low self-efficacy (Artino, 2012).

In other studies, the practice of using standards-based grading has demonstrated a positive impact on student achievement and self-efficacy in the lower grade levels prior to the students making the transition to the middle school level. For example, improving students' sense of self-efficacy using standards-based grading has shown to increase their achievement and self-efficacy in other subjects such as with foreign language at the collegiate level (Burleson, 2013). Likewise, middle school educators are seeking ways to incorporate similar self-efficacy building strategies into their classroom curriculum.

Limitations of the study

First, the research is limited because of the time restraints in which the study falls being only a four-week grading period. The length of the study may not be enough time to show a significant impact on the student achievement as much as the researcher anticipated. This is primarily due to weather related issues at the school causing closures, the research time limits to meet the university requirements and deadlines affiliated with this study for the researcher to maintain the status of completion by the spring of 2018. Secondly, the population of participants is smaller than usual larger scales for an experimental study such as this, but the researcher was limited by the school board and the director of schools to only two schools in the district which were allowed to be involved in the study.

Delimitations of the study

The students will be exposed to the same curriculum in their ELA classes and take the same assessment in both schools at the same time period. By selecting the sixth and seventh grade student population, neither of the groups has experienced standards-based grading (SBG) since grade 4. (In our district, SBG is used for grades K-4, but not at all in middle school grades.) Both groups have not had SBG in over a year's time. Both groups of student participants involved in the research are similar in male and female ratios as well as in socio-economic diversity.

Definitions of Terms

Self-efficacy. Self-efficacy is what an individual believes he or she can accomplish using his or her skills under certain circumstances (Snyder & Lopez, 2009).

Self-motivation. Self-motivation is the ability to satisfy a desire, expectation, or goal without being influenced to do so by another person (Dreeke, n.d.).

Standards-Based Grading. Standards-based grading involves measuring students' proficiency on well-defined course objectives (Tomlinson & McTighe, 2006).

Traditional Grading. Simple letter grades ranging from A, B, C, D, and F. Assessments are based on teacher-defined criteria. A single overall grade per student based on a combination of related and unrelated assessments of skills, knowledge, performance and conduct over a period of time (Cicmanec, 2001).

ELA Class. The abbreviation for English Language Arts in core class subjects (Tennessee State Testing and Evaluation Center, & Tennessee Department of Education, Division of Curriculum and Instruction, 1992).

Standards. Statements which indicate what students are expected to know and be able to do in each curriculum area. Learning standards are concise, written descriptions of what students are expected to know and be able to do at a specific stage of their education. Learning standards describe educational objectives—i.e., what students should have learned by the end of a course, grade level, or grade span—but they do not describe any particular teaching practice, curriculum, or assessment method (Glossary of Education Reform, 2014).

Tennessee Comprehensive Assessment Program (TCAP). Tennessee Comprehensive Assessment Program is the standardized testing program used in public schools in Tennessee. The majority of Tennessee's public schools administer a comprehensive exam to their students at the end of each school year beginning in the third-grade measuring ELA, Math, Science, and Social Studies achievement (Tennessee Department of Education, 2015).

Summary

It is evident that there have been struggles with differing grading policies in the educational system (Common Core Standards Committee, 2014). Many factors often impact student learning and achievement while students were in school. Teachers, administrators, and parents have been faced with the obstacles of improving the educational system. With the implementation of these new state standards that have been determined to be more rigorous and better aligned to national norms, it has become imperative that the grading practices of teachers be evaluated to determine the best policy that allows students to experience consistent levels of success and improve their feelings of self-efficacy (Gietschier-Hartman, 2015).

This chapter presents a brief introduction of grades involving educational reform and the concept of standards-based grading, while establishing the need for further research into the effects of SBG on student performance. A brief history of standards-based education has been

presented, providing the background necessary to understanding the context for the study. The second chapter looks at the literature relevant to the study and will further build a foundational basis for a study of SBG in a classroom setting. The first two chapters bring forth what administrators, teachers, and students have been faced with in regard to higher student achievement success as well as the increased pressure to meet accountability measures set forth by the state department of education.

By examining the amount of increased testing periods throughout the school year and the emphasis on how performance on these assessments impacts both teacher and student accountability, it seems logical to investigate methods of grading practices better aligned to the nationally normed tests and learning objectives. The third chapter presents the details of the classrooms involved in the study and the methodology used to guide the research, which will include the setting, the participants, and the instruments used during the study.

CHAPTER TWO

Review of the Literature

This chapter delves deeper into the study, sharing specifically the relevant literature and methodology about standards-based grading. The literature review was conducted by searching various databases that presented findings and discussions in scholarly articles regarding the use of standards-based grading. Some of the search terms used while searching for relevant articles on the topic were: grading, academic standards, state standards, elementary schools, high stakes tests, mixed methods research, standardized tests, scores, self-efficacy, middle schools, high schools, motivation, student motivation, performance-based assessment, evaluation methods, evaluation criteria, scoring formulas, scoring rubrics, educational practices, and statistical analysis. The search was limited to the last fifteen years to obtain the most recent and relevant information. The search was conducted primarily in (a) educational research databases, (b) other dissertations about standards-based grading, and (c) peer reviewed journals.

Some of the resources used to search for material for the literature review were ERIC, Academic Search Premiere, PsycInfo, and Education Research. Reading through these resources and cross-referencing how each was similar to this study helped narrow the focus to present the data necessary to validate my stance on the use of standards-based grading in middle school subjects, its impact on student achievement, and its effect on student self-efficacy.

Perhaps the most important thoughts from the literature speak to the importance of schools needing to do “more of what matters” (Betts, 1998). The idea of education as a system

where all its pieces interact is part of the larger theoretical framework introduced in the second chapter.

The first chapter provided several reasons why standards-based grading has come to the forefront in school settings over the last fifteen years and the resistance factors associated with implementation at levels above the elementary level. It also discussed how society perceives the grading process and the many ways grading policies can impact student motivation and academic performance.

Humans are fueled by a desire to achieve goals. Attaining goals helps humans satisfy specific needs and desires. Needs are categorized into a hierarchy, in which certain needs must be met before others can be conquered (Maslow, 1951). More basic needs must be satisfied before higher-order needs can be surmounted. Behaviors will be centered on meeting the needs in the lowest order, and then will progress to higher orders as needs are satisfied (Burleson, 2013).

The most important types of motivation for educational psychology are achievement, motivation, and people's tendencies to strive for success and choose activities that are goal oriented (Hancock, 1996). Many research studies have revealed that the main difference in achievement is the difference in how someone is motivated. Some people are motivated to learn, while others are motivated to perform well and get a good grade (Guskey, Swan, & Jung, 2011).

When looking at the effects of motivation with students and their ability to learn, one must examine the social cognitive theory, posited by Albert Bandura, which explained that people learn their behaviors by observations within social settings. It has given rise to a deeper understanding of how humans develop their individual beliefs of their own capabilities to succeed. Specifically, self-efficacy is defined as “people's beliefs about their capabilities to

produce designated levels of performance that exercise influence over events that affect their lives" (Britner & Pajares, 2006). Self-efficacy and motivation have been instrumental in understanding the metacognitive influences that contribute to individual success.

Theoretical Lens and Related Theoretical Literature

Albert Bandura's work is the primary theoretical framework that informs this study of standards-based grading. The social cognitive theory shaped by Bandura outlined how children and adults operate cognitively on their social experiences and how these cognitive operations then come to influence their behavior and development. Children begin to represent their environment and themselves in terms of response-outcome expectancies, perceptions of self-efficacy, and evaluative self-reactions (Bandura, 1986).

Beginning in the elementary grades, students begin to shape their own view of self and their perception of the learning they have mastered. It is also important to note that students experience grades as rewards or punishments that shape their perceptions and behaviors. Students become conditioned to the extrinsic rewards that grades convey (Yeager & Dweck, 2012), and so, it seems, the experiences one has throughout the years may serve as an impetus for the efforts one expends and also for the motivation to engage in the learning process (Kelly, 2008). To become more confident, proficient learners, students need grading procedures that explicitly provide opportunities for improvement to strengthen images of self-efficacy and motivation.

Bandura's theory of self-efficacy proposed that people develop "domain-specific beliefs" about their own abilities and characteristics that guide their behavior by determining what they try to achieve and how much effort they put into their performance in that particular situation or task (Bandura, 1994). When considering traditional grading practices, Bandura's theory remains

applicable to students who struggle with learning and are rewarded for their efforts with failing grades. Their sense of self-efficacy is impacted by the recognition that others readily receive good grades for similar effort, or less, than they expend to receive failing grades.

Historical Perspective

The earliest traces of educational standards go back to Ralph W. Tyler in 1934. He argued that objectives and aims should not be eloquent and grand, but instead should be stated in terms that clarify the desired behaviors and outcome of the students (Stones, 2012). In the mid-1950s, Bloom published his Taxonomy of Educational Objectives (1956) to help "specify objectives so that it becomes easier to plan learning experiences and prepare evaluation devices".

Educators have been using standards of learning for decades; however, the concept of an entire educational system focused on a set of prescribed standards is considerably newer. In the late 1970s and early 1980s, policymakers and government leaders began to take notice of the declining educational situation in the United States. Based on international assessments, it was becoming clear that American students were beginning to lag behind their counterparts in other countries.

The Secretary of Education during the eighties, T. H. Bell, created a task force to ascertain the quality of American education; the result of their effort was a report titled, *A Nation at Risk* (1983). This report launched public education into a new age of accountability, standards, and assessment (Hamilton, Stecher, & Yuan, 2008). The task force continued with recommendations for improving the quality of education. In essence, this document published the first official list of standards to be implemented. English, mathematics, science, social studies, and computer science were addressed as basic elements of a strong curriculum, with

each subject receiving a specific list of suggested course offerings. The report also explicitly called for "more rigorous and measurable standards" as well as the administration of achievement tests (National Commission, 1983). From this beginning, standards-based education found its roots and emerged as a key factor in school reform. Following the release of *A Nation at Risk*, state governments responded by creating their own task forces designed to scrutinize their own systems of education and develop action plans for improvement (Bell, 1993).

The Federal Government

The role of the federal government in the standards-based reform initiative can be credited to President George H. W. Bush's Education Summit in 1989. During this meeting between President Bush and the state governors, the call was made for the government to develop strategies for improving education to prevent American students from continuing to fall behind their international peers (Hamilton et al., 2008). Although the goals developed at this summit meeting never became official law, they marked the first-time education improvement became a topic of national political interest, based on the report from *A Nation at Risk*.

In 1994, President Bill Clinton signed into legislation the Goals 2000: Educate America Act, which reinvigorated the notion of improving education by creating standards of achievement for all students. Among the goals was the expectation that all students would "leave grades 4, 8, and 12 having demonstrated competency over challenging subject matter including English, mathematics, science, foreign languages, civics and government, economics, arts, history, and geography," while increasing the graduation rate to 90%.

Goals 2000 made it necessary to increase the number of assessments students were required to complete so these goals could be measured. In addition, it started the process of

identifying exactly what information students should know and what skills they should be able to perform on these assessments.

In 1994, Congress reauthorized the Elementary and Secondary Education Act, which required each state to develop standards for all students in kindergarten through twelfth grade and introduced adequate yearly progress. States were required to demonstrate evidence of growth and improvement, but this reauthorization did not provide any deadlines for completion; therefore, no sense of urgency was present. Additionally, no consequences occurred if no evidence of growth or improvement was found.

By 1997, only 17 states had succeeded in defining specific standards in core content areas (Rudalevige, 2003). President George W. Bush, Jr., working with the legislation and ideas already in place in education, formalized the No Child Left Behind Act (NCLB) in 2001. NCLB mandated yearly testing and required states to release annual report cards showing their performance. Student achievement was broken down into sub-populations, and failure to meet the needs of each group of students meant schools did not meet the requirement of adequate yearly progress (Rudalevige, 2003). Expecting all students to reach proficiency meant states and schools could not ignore the mandate for improvement, and standards-based education became the norm for educators.

In 2010, the Common Core Standards (CCS) in English/language arts and mathematics were released and presented to the states jointly by the National Governor's Association (NGA) and the Council of Chief State School Officers (CCSSO). Although adoption of the standards remained at the discretion of each individual state department of education, the ante to do so was increased when President Obama announced the Race to the Top Assessment Program. Any state wishing to be in the competition to receive millions of dollars was required to adopt the CCS. In

addition to adopting the CCS, states were required to develop assessments that (a) were valid, (b) supported and informed instruction, (c) provided accurate and specific findings regarding students' knowledge, and (d) measured student achievement in relation to academic standards (U.S. Department of Education, 2012). Methods, assessments, techniques, and grading must each align to the standards, point students toward the goals, and communicate effectively to parents how their children are performing.

Evolution of the Purpose of Grades

When society thinks of grading practices, they may not all realize the early beginnings of grading and how the parameters of grading came about. Grading can be traced back to 413 B.C., when survivors of the Athenian army were thrown into quarries; their lives or release from capture depended on their ability to quote verses of Euripides (Cureton, 1971). In this early beginning, grading simply meant passing or failing. Creativity, neatness, and effort had no role in this test. The first achievement test occurred in the sixth century in China with the administration of the first civil service examination consisting of writing, reciting classic works from memory, and analyzing political problems (Crozier, 2002).

One letter grade or a "percentage score is not a good way to report student achievement in any subject area because it simply cannot present the level of detailed feedback necessary for effective learning" (Marzano, 2000, p. 106). As surprising as it may seem to many parents, teachers, administrators, and educators of higher learning, grades did not always exist for students. Prior to the mid-nineteenth century students were judged by their progress within content areas and skills (Hargis, 1990). Student progress was documented through narratives or statements of skills and knowledge to determine areas for further instruction, to determine competency for apprenticeship, or to determine eligibility for entrance into higher education.

Parents and students received an accurate picture of their progress, knowledge, and skills. There were no grades issued in the traditional form of A, B, C, D, or F.

As the number of government-supported elementary schools and high schools began to increase during the 40 years between 1870 and 1910, the number of public high schools increased from 500 to 10,000 (Hargis, 1990; Marzano, 1996). This sudden influx of student attendees necessitated a move toward the more streamlined, industrial model of percentage scales and letter grades for recording progress in high school. This industrialized model of reporting progress was the beginning of the grading system that students, parents, and teachers appear to find convenience and comfort in today (Schimmer, 2016).

The earliest forms of student grading placed the subjectivity on the shoulders of the teacher. Grading meant organizing student work into categories of deficient, medium, or high; the concept of grading was merely the sorting and ranking of students (Cureton, 1971). In the latter half of the nineteenth century, teachers began using percentage scores to report student achievement, (Cureton, 1971).

Not until the beginning of the twentieth century did educators begin to search for a more scientific method of grading; most institutions used the percentage method, but the requirement for passing varied from institution to institution. In some cases, students needed a 60% to pass, while in other cases a 75% was required. Additionally, studies as early as 1912 found that teachers did not grade consistently; considerable variability was found in the marks given by different teachers on the same assessments (Cureton, 1971). From these analyses, the conclusion was drawn that, while teachers could score papers reliably if limited to percentages that were multiples of five, such as 90 or 95, they could not score reliably when using more precise grades

such as 92, 93, or 94. As a result, many educational institutions adopted a letter grading scale, issuing an A for a band of percentages such as 90-100 (Cureton, 1971).

The Coleman Report (Coleman, 1966) became the impetus for a shift from evaluating educational inputs to evaluating learning outcomes. Assessment of learning outcomes has gained momentum since the publication of *A Nation at Risk* and the reauthorization of the Elementary and Secondary Education Act now known as the No Child Left Behind Act of 2002. The NCLB legislation (Townsley & Buckmiller, 2016) called upon educators to raise all students to a specified level of competence in academic achievement standards and continues to hold states, districts, and schools accountable for making sure that all students meet them (Stiggins, 2005).

Grading Practices

More recent surveys of teachers reveal that the same purposes of grading are still prevalent today. Many of these surveys indicate that teachers believe grades should be used to accurately indicate a student's academic level of accomplishment and concerns surfaced regarding a lack of consistency from teacher to teacher (Guskey & Swan, 2011). Other stakeholders believe the grade a student receives should include an element of effort, while others believe grades motivate students to perform better (Brookhart, 2011).

Formal training in grading practices is virtually non-existent, leaving inexperienced teachers to develop a practice they deem appropriate. Without knowledge of the effectiveness of various strategies, many resort to the only practice they know, which is the grading methods they experienced in their own coursework (Guskey, 2004).

However, the increase in standards-based educational efforts and initiatives has sparked new thoughts and ideas about how grades should be assigned and reported, and a new method of grading has emerged. Today, two general practices of grading have been adopted by teachers and

schools. Many still use a traditional idea of grading, but others are implementing a practice now known as standards-based grading (Dweck, 2014).

Traditional Grading

Traditional grading has its roots in the history of education. It has been in place for centuries, receiving only small tweaks along the way. Most of the U.S. population understands traditional grading methods because those methods have been used since before the twentieth century. Parents are familiar and comfortable with their children receiving a final letter grade for a course and understand the implied meaning of a grade such as a "B" or 94% (Guskey, 2011).

While some of the small details of traditional grading vary from teacher to teacher, the basic principle is that students receive a numeric grade for each assignment or assessment completed. Students earn points for a variety of activities, assessments, assignments, and behaviors that are accumulated throughout the grading period. Those points are then added together at the end of a term, and the teacher assigns a grade based on the total number of points earned (Marzano & Heflebower, 2011). With this traditional system, the receiver of the information has little to no understanding of what the student specifically knows. The student could possess a limited understanding of all the content presented during the course or understand some of the material very well but have significant learning gaps in particular areas.

Consider for example a student who receives a final grade of 75% in a class that consisted of four exams. The possible distribution of grades was 90%, 30%, 90%, 90%, indicating a fairly strong student who did well for the most part, but apparently had one area of great difficulty. On the other hand, the distribution could have been 67%, 67%, 100%, 67%. This distribution of scores presents a student who has struggled for most of the course but had one

shining unit in which he scored remarkably well. The final course average of 75% does not provide any insight into the actual performance of the student.

Issues of traditional grading methods.

In this era of standards-based education, the problems with traditional grading practices are becoming more and more prevalent. One major problem associated with these grades is that different groups desire different approaches to calculating the grade, which leads to different interpretations of the grade. Secondary school teachers tend to give high grades to students who work hard in class, including effort as part of the grade (Brookhart, 1994). Over time this trend has resulted in grade inflation. Zirkel (2007) reported that students taking the SAT in 2000 scored no higher than their counterparts who took it in 1990, yet they earned an average of three tenths of a point higher in their high school classes. Grade inflation affects students' perceptions of their scholastic abilities; which in turn impacts their feelings of self-efficacy.

The traditional grading scale is limited because it does not show what a student is specifically learning or what they should be learning at any given time. It provides no explanation for why or how a student ended up with a particular grade (Allen, 1998). The traditional grading scale leads to hours of subjective grading and fosters a testing culture. While it may be simple for teachers to understand, it takes a lot of time to create and grade the assessments that drive the traditional grading system (Marzano, 2003).

Perceptions about grading

To address the issues created by the act of grading, one must consider the reason underlying the assigned grade. Brookhart (1993) conducted a study of classroom teachers to determine the meaning and values teachers associated with grades. In the study, 84 teachers were presented scenarios involving grading and asked for their responses in each situation. The

scenarios involved questions regarding effort and ability, missing work, and student improvement. The analysis of the results revealed teachers' beliefs that grades are something students earn, much like a paycheck or compensation.

Grades, at least from the perspective of the teachers, could be likened to currency, with students who worked hard receiving a better paycheck at the end of the term. In this sense, the use of grades as a strategy for classroom management is apparent. Of interest in Brookhart's (1993) study is the evidence of a double standard. In one particular question, a student who performed better than average received a grade in line with her achievement, while a student who performed well below average often was rewarded with a better score if justification could be found. The perception of the teacher played a significant role in the final grade; students perceived as hard workers who did not cause discipline issues in class were awarded passing grades, even though they did not exhibit signs of academic achievement, while others who might have performed well on assessments and had a firm grasp of the content were punished with a lower score because of a perceived lack of effort.

Students value grades differently than teachers. Student perceptions can reflect their levels of motivation to perform on assessments. This motivation, or lack thereof, can also impact their own feelings of self-efficacy regarding successfully performing on a test. Using focus groups at two undergraduate universities, Sanders and Anderson (2010) asked students about their perceptions of grades. The researchers learned that students believed grades did not adequately communicate their perceived level of success. Students were frustrated when they received C's when they believed they had learned the content of the course; many indicated a belief that the only grade that signaled success was an A. The differences between student and teacher perceptions of grades were studied further by Goulden and Griffin (1995). They asked

teachers and students to respond to two prompts, “What do grades mean to you?” and “Grades are like _____” to investigate the perception held by each group of subjects relative to grades. The results fell into eight basic categories. Of particular interest was that 75% of the teachers had the same response; in their opinion grades served as a method of feedback to the students. Only 52% of the student responses indicated the same perception. For 23% of the students, grades were emotional triggers, while 10% believed grades were a method of gate keeping. Different interpretations of the meaning of a letter grade from the stakeholders illustrate a significant problem with traditional grading methods.

While grade inflation appears to be rampant at one end of the spectrum, another problem emerges on the opposite end. Nationwide, 7,000 students drop out of school each day (Alliance for Excellent Education, 2010), in many cases because of failing grades. Failing even one term of a math or English class could jeopardize a student’s likelihood of graduating with his peers. Unlike standards-based grading, traditional grading methods leave students little room for error. Students are given assignments and assessments, with one attempt to score the best grade they possibly can. Once the teacher assigns a grade, it is final. Students who do not turn in an assignment typically receive a 0, which is averaged with all the other grades for the final mark. Students are not encouraged, and even may be forbidden, from working to improve their grades through reassessment (O’Connor, 2009).

Grades have long been identified by those in the assessment and curriculum community as prime examples of unreliable measurement (Ainsworth, 2003). Huge differences exist among teachers in the criteria they use when assigning grades. The unique adaptations teachers use in assigning grades to students with disabilities and English learners make that variation wider still (Schimmer, 2016). These varying grading practices result in part from the lack of formal training

teachers receive on grading and reporting. Most teachers have scant knowledge of various grading methods, the advantages and shortcomings of each, or the effects of different grading policies on students. As a result, most simply replicate what they experienced as students. Because the nature of these experiences widely varies, so do the grading practices and policies teachers employ. Rarely do these policies and practices reflect those recommended by researchers and aligned with a standards-based approach (Brookhart, 2013).

Standards-Based Grading

The shift in focus on standards in the classroom and the expectations for mastery and learning all have led many educators to reconsider the way grades are assigned. If all students are to meet a prescribed set of standards, and schools are held accountable for student performance, logically it would follow that the method whereby grades are given should be transformed to align with the standards.

Prior to this age of accountability, students at the secondary level had more freedom to select courses of study that held their interest or were suited for their planned career choices. Students who were not exceptionally studious or who did not like school could opt to take low level courses or many electives. Now all students, regardless of their aspirations for the future, are required to take a minimum of three years of math (typically two years of algebra and a year of geometry), four years of English, three of science, and three of social studies. In many districts, two years of a foreign language is also required (Common Core Standards Committee, 2014). To help all students reach these lofty and rigorous course requirements, a system based on scaffolding and support is crucial.

Standards-based grading removes the connotation of finality that is present in traditional grading and replaces it with a feeling of hope for students. It is based on the idea that the purpose

of assessment and a grade is to report accurately the achievement level of the student. In SBG, grades are based solely on demonstrating proficiency in content; elements of non-academic value (such as work ethic, behavior, self-efficacy and effort) are not included in the final grade report (Marzano & Heflebower, 2011; Stiggins, 2005).

In a truly standards-based classroom, a student no longer receives a single letter grade or percentage for a class. Instead of a grade for "math," the report card would contain individual marks for concepts within math. This practice would include the teacher reassessing until mastery in each topic is reached by the student. The student is encouraged to continue learning and practicing until it is possible to pass each concept with proficiency. Reporting grades in this manner shares explicitly the areas of strength and weakness of each student and removes from the calculation all non-academic factors (Guskey et al., 2011).

SBG shifts the focus of grades and education to competency learning and student achievement. It is a first step in ensuring alignment in curriculum and testing standards, and an intense effort to remove "point-grubbing" from student grades (Cox, 2011). SBG provides a medium to assist in eliminating grade inflation and grading inequities, as well as offering students a sense of hope and a structure designed to foster success and self-efficacy.

Current SBG initiatives.

SBG has been relatively well-received in the elementary grades, with entire schools adopting the practice completely, including revising the report card format parents receive each grading period (Aidman, Gates, & Sims, 2001). The North Spencer School Corporation in Indiana (Tassell, Kemp, Litkenhus, & Schriefer, 2006) adopted SBG in its elementary schools (grades K-6) after reviewing student performance on the state-mandated Indiana Statewide Testing for Educational Progress Plus (ISTEP+) standardized test and student grades, specifically

focusing on the students who did not pass the test. Of the 101 students who failed at least one section of the ISTEP+ test in the fall 2001, 85 earned an A or B in math or reading. This discrepancy between classroom grades and external assessment scores motivated the district to not only seek close alignment between the content standards and classroom instruction, but also to seek a reporting method that would better inform parents of their child's true achievement level. The results of implementing SBG in this district were very successful. Parents felt better informed about their child's performance, thus improving the lines of communication between the school and the home.

Additionally, SBG appeared to address the issue of grade inflation. In 2001-2002, 53% of students who earned an A or B failed the English/language arts portion of the ISTEP+. After implementing SBG in 2004 2005, only 32% of students who were reported either at or above grade level failed the same portion of the test. In math, the percentage of failures for A/B students was 32 in 2001- 2002; that percentage decreased to 17% in 2004-05 (Tassell et al., 2006).

A similar study confirmed the same findings in elementary schools in Northern Georgia. Hardegree (2012) analyzed fifth-grade students in eight elementary schools in North Georgia to determine whether grades on SBG report cards would provide an accurate measure of the grades received on a standardized criterion-referenced test. Results of this study found that a comparison of students who met, did not meet, or exceeded classroom standards had significantly different means on the state exam in mathematics and reading. Students who received classroom grades of "meeting standards" scored higher on the test than those who received grades of "not meeting," while students with grades of "exceeding standards" outscored

both of the other groups. Hardegree's study suggested SBG marks are an appropriate predictor of performance on external assessments.

Not all studies of SBG show improvement in student performance. In contrast to the studies by Tassell et al. (2006) and Hardegree (2012), Craig (2012) analyzed student achievement scores on the mathematics portion of the fourth-grade Massachusetts Comprehensive Assessment System. Comparisons of SBG to non-SBG schools suggest no difference in the growth or the performance levels of students, regardless of the school type or report type. However, the study found that components of SBG may have a positive academic impact on at-risk students. Nonetheless, the study illustrates the need for further testing and research.

Improvement in education is frequently judged based upon student achievement. Therefore, the question becomes: "Does standards-based grading improve student achievement?" Craig (2012) attempted to answer that question during her doctoral dissertation. The author states that the initial reason for the study was to expand the use of standards-based grading into junior high by providing evidence that it positively impacts student achievement. There are three claims made by Craig:

1. There is not a general understanding among practitioners regarding quality standards-based grade cards.

2. There was no evidence that standards-based grading affected student achievement.

3. Removing failing grades may have a positive effect on low-income or special education students' achievement.

This may speak to the importance of hope for students in recovering from a failing grade (Craig, 2012). One major issue in the study lies in the fact that the quality of the report cards

observed was not consistent. There was clear information within Craig's literature review and theoretical framework that spoke to the importance of instruction and assessment. However, this played no role in the actual research. Instead, the researcher focused on student achievement and the actual report card document. While Craig's (2012) study found that there was not an improvement in achievement, a different study suggested that standards-based grade cards can help predict success for students.

Hardegree (2012) found in her study that standards-based grade cards provided accurate predictive information about how a student would perform on a high-stakes standardized assessment. This study helps build the case for standards-based grade cards since other studies indicate traditional grades do not accurately reflect how students will perform (Hardegree, 2012). However, Cox (2011) found the opposite to be true. In her study, she found that traditional grades have a slightly stronger correlation to standardized assessments than standards-based grades.

Lee's (2013) study was unique because it targeted a system that was giving both styles of grades, traditional letter grades and standards-based grades. He found that letter grades had a slightly stronger correlation to a standardized assessment, but also found that standards-based math scores provided a significant correlation as well. Upon reviewing all this conflicting information, it seems there is little consistency.

Interestingly, one major difference between these studies was their scope. Each study looked at different organizations, documents, and implementations. Craig's (2012) study included an entire state's education system with varying quality grade cards. Hardegree's (2012) and Lee's (2013) studies focused on a specific school system with similar grade cards, training, and implementation. Cox used scores from a rural Kentucky school district. Perhaps the

difference is actually in the implementation and use of standards-based grade cards that makes a difference. That implementation and use is the focus of this study. Lee's (2013) study also addressed the perceptions of teachers and administrators and how they believed grades correlated to performance on standardized assessments. He found both groups felt that external factors played a large part in determining grades as well as their correlation to standards.

Administrators felt the largest external factor was teacher experience and knowledge about assessments and standards. Teachers had many external factors, such as test validity and parent influence. Interestingly, teachers expressed a "lack of confidence that their peers were using consistent strategies from classroom to classroom." As discussed earlier, most teachers expressed a deep desire in the transition to build more consistency between classrooms (Lee, 2013).

The literature surrounding standards-based grading suggests the grading mechanism alone is not a catalyst for changing student achievement, but rather a catalyst that can cause ripples into instruction, assessment, and parent involvement. Craig's (2012) study speaks strongly to the fact that standards-based grading alone may not make lasting change. However, claims by other authors (Kohn, 2011; Reeves, 2011; Scriffiny, 2008) indicate standards-based grading impacts other areas of the system and creates a strong case for continuing the dive into standards-based grading.

Craig's (2012) study did indicate a need for further investigation into standards-based grading. For this study, it becomes increasingly important to look at grading as a potentially high-level strategy that can be a catalyst for improving the system as a whole. If standards-based grading can be used as a catalyst for change in an entire system, correct implementation becomes

exceedingly important. It is this correct and impactful implementation that this study seeks to ensure.

Specific feedback can improve student performance by making students more aware of their abilities in relationship to the standards, by providing students cues and hints on how to improve, and by helping them understand that they are capable of learning. Kluger and DeNisi found in their 1996 meta-analysis that the most effective feedback focuses on specific learning goals and when it is focused upon what students did correctly rather than on incorrect responses. Brookhart, (2000) specifically found that when students receive informative feedback explaining both strengths and weaknesses, they are more likely to demonstrate higher levels of intrinsic motivation towards the task at hand than those receiving just a grade, thus boosting their feelings of self-efficacy.

Effects of Grading

Hattie and Timperley (2007) found that the least effective forms of feedback include programmed instruction, praise, punishment and extrinsic rewards. They also found that there is a negative correlation between extrinsic rewards and task performance and that tangible rewards significantly undermined intrinsic motivation. Greenstein, (2015) concluded that extrinsic rewards work negatively because they remove people‘s taking responsibility for motivating and regulating themselves.

It is clear the effects of grading on students are widespread. Students who generally perform well in school tend to view assessment and grading as evidence of their success. They are likely to seek challenges, take risks, and interpret assessment as opportunities to gain feedback. They tend to persevere during setbacks and accept responsibility for their results (Artino, 2012). Each of these feelings leads to more success and a positive cycle develops.

In contrast, students who do poorly in school view assessments as evidence of their failures. Instead of accepting new challenges and taking risks, these students feel hopeless and seek the easiest options. Rather than developing perseverance, and improving self-efficacy, they learn to retreat, avoiding initiative. These students fall into a negative cycle leaving them in a state of frustration, fear, and defeat (Stiggins, 2007).

Grading and its effects on students is a central component in the conversation about standards-based education. Ultimately, students are the primary beneficiaries of assessment information and performance levels associated with them (O'Connor, 2011), and educators need to consider how grading impacts the students. Since students spend a considerable portion of their school career involved in assessment of some type, it behooves educators to understand how this manifests itself in student beliefs and behavior. Many of the issues present in traditional grading methods have negative effects on students and can be corrected by the effective implementation of SBG (O'Connor, 2011).

Contrary to many opinions, traditional grading practices have adverse consequences on student motivation. There are two types of motivation — intrinsic and extrinsic (Huisman, 2016). *Intrinsic motivation* is the act of doing something for the inherent enjoyment or interest, while *extrinsic motivation* is the act of doing something because of the resulting outcome (Ryan & Deci, 2000). Assigning grades to student work as a motivational factor can be a problem for the students. Crooks (1988) reported an analysis of three studies that show that, when a grade is assigned to an activity that previously was voluntary, student interest declined, and they were less likely to return to the activity. If students were working on a project or activity because of interest (intrinsic motivation), they were likely to persevere, even when the task became difficult. In contrast, students who were working on a project because they were going to be rewarded

chose only the easiest tasks. On the other end of the spectrum, students fear punishment and thus shut down when faced with even the simplest of tasks and especially in regard to a major project or assessment piece. In addition, the extrinsic student group was driven by answers and often looked for short cuts, whereas the intrinsic group sought deeper knowledge and more meaningful approaches to the projects.

Therefore, if students are to turn the grading process into an intrinsic motivator, they need to feel a sense of competence toward the task they are being asked to do (Ryan & Deci, 2000). Through the use of learning targets and instruction that is aligned to the assessment, students should develop the feelings of competence necessary to succeed in the classroom. Students who believe the goal of an assessment is to provide helpful and informative feedback, rather to control their behavior, tend to develop a deeper sense of intrinsic motivation for the learning which improves student achievement and impacts student self-efficacy (Crooks, 1988).

Student Self-efficacy

Students must deal with the discrepancies of grading methods as often, if not more, than teachers. Grades should be indicators of academic success, but often do not reveal what a student might know. Students at the elementary, middle, and high school level of education must work to make sense of the grades they receive, often trying to find personal growth and instances of genuine learning despite low grades (Sanders & Anderson, 2010). Grades can play a key role in affecting a student's self-efficacy.

A study by Shim and Ryan (2005) investigated how grades in the classroom affected students' self-perceptions and their intrinsic values. By surveying 361 middle school students using a 7-point Likert-type scale, they found that higher grades correlated with higher self-efficacy; in addition, students who received higher grades generally felt more intrinsic value

from the class than those who received lower grades. The results of this study also suggest that, at least for middle school level students, mastery goals (those that focus on understanding and competence) support the development of self-efficacy. Considering the current trends in education, this study provides some support for the use of learning targets and standards-based grading in the classroom.

Student self-efficacy may be fostered best with long- and short-term goals in conjunction with mastery learning targets. Students need opportunities to improve their self-perception with real achievement results (Crooks, 1988). Self-monitoring of growth and development on learning targets encourages students to set personal goals, while mastery of targets provides students with academic success (Moss & Brookhart, 2012).

There are no studies that support the use of zeroes or low grades as effective punishments for students. Instead of prompting greater effort, zeroes and the low grades they yield more often cause students to withdraw from learning. To protect their self-images, many regard their low mark or grade as irrelevant and meaningless. Other students may blame themselves for the low grade but often feel helpless to make improvements (Guskey, 2004).

Traditional report cards do not promote self-efficacy or motivation for many children. Poor grades do not build a student's belief in his or her own ability to learn content; do not create a sense of self-efficacy; and will result in decreased motivation to continue striving to learn. Yet teachers continue to issue failing grades with the belief that the fear of a failing grade will somehow motivate students to improve. A system of standards-based report cards that removes the concept of failure is one positive step toward sustaining a student's belief in his or her capacity to learn, (Guskey, 2010).

Student Performance

In a meta-analysis of 64 research studies conducted between 1968 and 1990, Anderson and Pavan (1993) reviewed comparisons of student achievement in non-graded schools compared to their counterparts in similar graded schools. When looking at the studies that used standardized achievement tests to make comparisons, only 9 (out of 94) resulted in graded schools outperforming the non-graded schools. The dates of the research used in this analysis coincide with the time in educational history when traditional letter grading based on percentage was the norm. It is fairly safe to assume the schools that used grading methods were most likely grading with a traditional method, and the results of this analysis suggest that perhaps traditional grading does not have a positive effect on student performance. To further review the relationship between classroom grades and achievement on high-stakes tests, Haptonstall (2010) conducted a study to determine the correlation between classroom scores and end-of-course (EOC) assessment marks of students in grades 6 through 12 in a sample of Colorado school districts. The focus of this study was to see how closely classroom grading policies mirrored the achievement of students on the state assessment and to determine if the grading practices implemented in classrooms adequately measured the students' level of achievement. Although the study was not specifically designed to compare SBG to traditional grading, one school district in Colorado implemented SBG unilaterally and allowed for a comparison of SBG to traditional grades. Haptonstall compared this district to non-SBG districts and found a significantly higher correlation between classroom grades and end-of-course assessments for those students in the SBG environment. In addition, the EOC exam grades were higher for all populations of students who attended the SBG district. Not only did this study find SBG students performed better, but also it revealed numerous grading discrepancies in non-SBG schools for ELL students, low SES students, and Hispanic students. Pupils in these populations often scored

higher in the classroom than on the EOC exam, possibly giving them a false sense of accomplishment prior to the EOC exam (Haptonstall, 2010).

It appears that the educational pendulum is swinging away from what has been recognized as traditional reporting in the form of letter grades or percentages back toward the narrative descriptions of mastery that actually originated in the early years of public education in the United States (Hargis, 1990; Marzano, 1996).

The use of letter grades is firmly entrenched in today's society and will most likely remain so at the secondary level for the distant future (Marzano & Kendall, 1996). The primary factor in maintaining traditional grades has been their simplicity. Years of utilization of the letter grading systems has built familiarity that has made the system quick to record and easy to understand (Hargis, 1990). The A-F system of grading in content areas has attained an overall acceptance of society, especially in the educational realm with teachers who are resistant to SBG and the changes it would require with their current grading practices. Parents, teachers, community members, and college admissions officers refer to students in terms of an A-student or C-student. The shift away from this familiar paradigm to a new system at the secondary level will require conclusive evidence that the change will positively affect student achievement (Schimmer, 2016).

The body of research supporting the implementation of standards-based grading is based on three primary elements that impact classroom practice: improved communication of student progress, the standardization of grading benchmarks, and the centralization of assessment by the teacher (Aidman, Gates & Deterra Sims, 2001; Guskey, 2004; Hargis, 1990; Marzano, 2003; Marzano & Kendall, 1996; McTighe & Bailey, 1996; Salend, 2005; Stiggins, 2005, Ward, 2004).

The use of standards-based report cards enables teachers, students, and families to track success continually with an emphasis on day-to-day formative assessment as well as progress monitoring and conferences with students to improve performance and feelings of increased self-efficacy for students (Marzano, 2003). Standards-based grading practices are tools for reporting a progression toward competency or proficiency. When dealing with students in the K-12 system, it is necessary that each student's performance should be interpreted relative to established instructional goals and standards, independent of other students' performances (Glaser & Nitko, 1971, Lalley & Gentile, 2009, Popham, 1978). At this level of schooling, the competitive idea of sorting should not take prevalence over each student's ability to learn at different levels. For this reason, performance must be consistently reported across grades and schools through standards-based report cards to inform students and parents of mastery that students have demonstrated within the curriculum and to promote progress toward higher levels of achievement (O'Connor, 2011).

When discussing achievement and feelings of success or level of motivation, one needs to look closely at how student self-efficacy ties in with these concepts. Beliefs about self-efficacy arise from an individual's history of achievement, from observation of what others are able to accomplish, from attempts of others to mold feelings of self-efficacy through persuasion, and from consideration of one's own physiological state during a task (Grusec, 1992).

Researchers have noted the impact of specific feedback on student learning: From the very earliest grades, some students learned a great deal very quickly and consistently scored high on assessments. The emotional effect of this helped them see themselves as capable learners, and so these students became increasingly confident in school and believed that success was within their reach. (Stiggins, 2005) Students who score lower on tests and receive poorer grades

beginning in early elementary grades will question their own capabilities as learners and enter a vicious cycle of reduced motivation, compromised views of self-efficacy, and correspondingly lowered achievement (Stiggin, 2008).

Stiggins emphasizes that for those students with compromised views of self-efficacy performance plummets as their motivation declines (2005). Lalley and Gentile (2009) summarize the foundation for grading along a continuum toward mastery with their observation that "not all students get it the first time and need additional attempts, and perhaps other methods or examples, before they try and try again."

It is no longer acceptable or tolerable that educators allow some students to give up in hopeless failure. The performance levels of 'approaching grade level standard' or 'below grade level standard' provide for a more hopeful perspective on learning for students and leave opportunities for continued self-regulation toward mastery. Providing opportunities for all students to achieve at higher levels is an essential component of standards-based grading and the primary justification for adopting the practice of using performance levels instead of grades to measure progress in achieving proficiency in standards and indicators.

Current Trends in Grading

The focus of standards-based grading is the assessment of student mastery at the point of assessment on designated standards within a content area. Marzano and Kendall (1996) emphasize that the key to standards-based grading is the use of the most recent scores, not a compilation of work over time. A student who struggles at the beginning of the term but masters the skill toward the end of the term can attain a performance level of 3 for 'At the grade level standard' or perhaps a 4 for 'Advanced at the grade level standard' despite the difficult start. The information conveyed to both students and families gives a more accurate picture of the

student's learning progress.

There are many instances in which students are expected to perform to the best of their ability on some type of measurement criteria. This does not always reflect performance inside a classroom. A good model for this is the driving test on which, in most states, it is necessary to pass a written test at 80% correct on rules of the road and other essential facts, as well as to demonstrate competence in authentic skills of driving. The material to be tested and the passing standards for the driving test are published for all applicants and passing both parts of the exam is necessary to receive a license to drive. Note also that a person who scores 80, one who scores 100 and one who needs three tries to attain at least an 80 are all treated the same: All are considered sufficiently competent to receive a license that allows them to begin their careers as licensed drivers (Fullan, 2001).

Although the analogy to driving tests probably ends there, teachers need to impress upon students as well as the general public that initial mastery is only that: the beginning. (Lalley & Gentile, 2009). The impetus for standards-based grading has been the urgency to identify student strengths and weaknesses in terms of content knowledge and skills. One overall letter grade in mathematics could not possibly represent the student's knowledge and skills across eight strands and dozens of standards. This content-driven standard-based reporting format is designed to inform students and families of their progress along a continuum of skills and builds self-regulation and internal dialogues as necessary to function in the zone of proximal development described by Brookhart (2011).

Grading systems that eliminate failing grades result in higher levels of motivation, self-efficacy, and growth for students who are at risk for learning; therefore, producing a median that is higher than systems depicting failure as a grade. In traditional grading practices, it is not

unusual for teachers to assign zeroes or Fs to student work that is missed, neglected, or turned in late. Doug Reeves (2004) affirms his process noting that "evidence to the contrary notwithstanding, there is an almost fanatical belief that punishment through grades will motivate students". If grades should represent how well a student has mastered the standards, then assigning zeroes for learner behaviors or social behaviors is not conducive to best practice (Guskey, 2002).

Educational leaders struggle to direct teachers away from using grades as a method of punishment for students. At a recent presentation to middle school teachers to introduce a new system of standards-based grading, a prevailing concern with the newer performance levels was how to give a student a zero or an F for not participating or completing homework (Craig, 2012). At a subsequent staff meeting to review the results of student performance on the Tennessee Comprehensive Assessment Program (TCAP) for middle school students several teachers were surprised by the level of growth and proficiency demonstrated by some of the students that they perceived as low achievers because they had failed their courses. These teachers have become accustomed to using grades to punish students rather than solely for reporting their level of academic knowledge and skills.

Providing feedback to students on their learning helps them understand the path they will need to follow to achieve proficiency in knowledge and skills. Richard Stiggins (2009) described how students become partners in the learning process because they are equipped to monitor where they are and how they can work toward the next level. Students take an active role in recognizing their level of learning and communicating their understanding to teachers and families.

This dissertation examined the effect of providing student feedback in the form of standards-based grading. Standards-based grading establishes a framework for providing feedback to students on their achievement levels within a set of standards. Student learning standards depicted on report cards are intended to indicate what students should know and be able to do at each of the grade levels or grade spans across their educational experience. The use of standards-based report cards enables teachers, students, and parents to track success continually (Dweck, 2014).

The first step in sound classroom assessment practices associated with grading is to ensure that grades are meaningful. In determining students' grades, teachers typically merge scores from major exams, compositions, quizzes, projects, and reports, along with evidence from homework, punctuality in turning in assignments, class participation, work habits, and effort (Guskey, T. R., & Swan, G. M. , 2011).

In *Fair Isn't Always Equal: Assessing and Grading in the Differentiated Classroom*, Rick Wormeli does not mince words as he calls for teachers to engage in honest discussion about grading: "We don't share our concerns with our own grading approach or that of a colleague's often, and we don't spend time with each other determining the meaning of a C, an A, or discussing what constitutes a 3.5 on a rubric" (Wormeli, 2006).

The purpose of grading is to describe how well students have achieved the learning objectives or goals established for a class or course of study. Grades should reflect students' performance on specific learning criteria. Establishing clearly articulated criteria for grades makes the grading process more fair and equitable. When the goal is mastery of standards, it doesn't matter that students might not complete exactly the same assignments or exactly the same number of assignments because the focus is on what the student is learning rather than how

much the student is doing (Brookhart, 2008). A standards-based approach to assessment still holds students accountable for the work they need to do to make progress, but it leaves teachers free to individualize and leaves students free to concentrate on learning (Miller, 2014).

Most systems of traditional grading include a single letter grade or percentage that encompasses assessment of study skills, persistence on task, work habits, and participation that sometimes supersede academic achievement in the content (Freedman, 2005; McTighe & Bailey, 1996). Traditional grading often consists of "hodgepodge grades" including elements of achievement, attitude, effort, and behavior into one amalgamated single symbol assigned to describe a student's level of mastery of course content (Guskey, 2006). Although stakeholders may protest that they easily recognize what a letter grade represents, there is so much disparity in grading that while a C is supposed to represent average achievement "in many districts, a C may effectively be a failing or at least below-average grade" (Zirkel, 2007).

When it comes time to determine a grade, standards-based grading provides a more straightforward process in lieu of combining various behaviors, student growth, and academic achievement into one grade (Schimmer, 2016). These are separated into independent categories for reporting, as all three are important to communicate clearly. If, for example, a student shows mastery of the standard, but is not timely with his or her work, one letter grade combining these two aspects of performance would be an inaccurate representation of academic achievement (Kohn, 2009). The separation not only gives clarity, but also weight to the different categories. Behaviors and growth can't inflate or deflate an academic grade when they are reported independently (Brookhart, 2008).

Furthermore, standards-based grading allows teachers to report information on individual elements of learning, a level of detail that is extremely important to families of children with

disabilities whose placement and intervention depend on these elements (Jung & Guskey, 2007). Scriffiny (2008) recognizes that different working styles can be easily accommodated in standards-based systems because modified assignments and assessments require no special adjustments in the grade book. The grade book simply shows where students are meeting standards, without reference to how they are demonstrating their learning or what modifications need to be made. In short, standards-based grading provides honest and meaningful information that parents want concerning their children's progress, while allowing educators an opportunity to explain and demonstrate the types of learning and the levels of achievement schools seek (Lehman, 1997).

Educators seeking to reform grading must combat some long-held traditions that stand as formidable obstacles to change. Although these traditions stem largely from misunderstandings about the goals of education and the purposes of grading, they remain ingrained in the social fabric of our society (Townsley, 2011). As more and more districts seek out successful transitions from traditional grading to standards-based grading, there are many things to consider such as effective training, transparency in communication, teacher attitudes, perceptions of parents, and community acceptance (Schimmer, 2016).

Standards-based reports provide information about student progress but may take many different forms. The report itself can take the form of age- or grade-appropriate expectations expressed in benchmarks, complete standards, open-ended statements, or abbreviated focal points (Guskey & Swan, 2011). Standards clarify the learning tasks for students and lessen the negative effects of grades on students (Gietschier-Hartman, 2015). Robert Marzano emphasizes that feedback provided by standards-based grading will improve self-efficacy and increase

motivation, thereby resulting in increased opportunities for students to be successful in achievement (Marzano, 2009).

Accordingly, in a standards-based grading framework, students do not receive an overall grade that averages their work performance overtime, and that may also include nonacademic factors, such as behavior or motivation. Instead, they receive multiple grades that reflect their proficiency relative to specific expectations. Teachers also encourage students to practice a concept or skill until they can demonstrate full mastery of each standard (Guskey & Bailey, 2009).

Advocates also note that the system improves student achievement by establishing clear learning targets, accommodating different learning styles, and giving students feedback during the course of instruction (Dardanoni & Modica, n.d.). Likewise, this system increases fairness in grading by having all students, regardless of teacher, work toward common goals in the same course, thereby decreasing reliance on subjective evaluation criteria. Finally, the system enhances communication between teachers, students, and parents by giving these stakeholders critical information about student learning goals and progress (Grusec, 1992).

Experimental studies link the feedback given to students to their motivation to achieve. Butler and Nisan (1986) found that students who received task-related comments instead of grades or no feedback had higher levels of motivation and achievement than other students who had grades or no feedback. They further found that grades may create a focus on the quantitative aspects of learning, stifle creativity, foster fear of failure, and undermine student interest in learning (Butler & Nisan, 1986). They also found that grades undermine future interest in achievement. In a similar study, Butler (1986) found that when students received individual comments (feedback), it yielded higher task-involved perceptions and lower ego-involved ones

than either grades or praise (p. 476). Butler concluded that students who received feedback (task-involving information) had higher interest, performance and effort towards the task than other students. Butler (1986) found that immediate feedback generally enhances learning of content whereas delayed feedback seems to improve achievement when the purpose of the instruction is both content and process strategies. Effects of feedback timing have been investigated in applied studies (classroom quizzes and programmed assignments); in experiments on test content; and experiments on list learning (Butler & Nisan, 1986).

Standards-based approaches to grading and reporting address these grading dilemmas in two important ways. First, they require teachers to base grades on explicit criteria derived from the articulated learning standards. To assign grades, teachers must analyze the meaning of each standard and decide what evidence best reflects achievement of that specific standard. Second, they compel teachers to distinguish product, process, and progress criteria in assigning grades (Guskey, 2006, 2009). In current educational practices, grading and assessment have become the focus in many K-12 classrooms. Formative and summative assessments have taken center stage in classrooms across the nation, which has directly impacted the way teachers think about grading (Marzano, 2010).

Larry Ainsworth (2003) maintains that expecting students to learn all the concepts and skills embedded in a state's standards may not be an achievable goal within a school year of instructional time. Ainsworth sets the stage for identifying grade level power standards at the local level. Learning that endures should be an essential criterion that we never lose sight of. Best practices in standards-based reporting call for a moderate middle ground between the amalgamated grades of traditional report cards and the cumbersome standards-based report cards

that report performance levels in every one of the dozens of indicators on state standards (Ainsworth, 2003).

Power standards developed at the local level provide a focus for instruction and learning on the essential knowledge and skills that students must acquire to be successful in successive grades and endeavors. Grades that reflect power standards provide information that is easily understood by parents and students and provides information they need to identify the next steps in the learning process. Teachers must develop "reporting standards that are specific enough to communicate the knowledge and skills students are expected to acquire but not so detailed that they lose their utility when shared with parents" (Guskey & Bailey, 2010).

Ainsworth (2003) reported that when Robert Marzano was asked what conditions were needed to implement standards effectively, he replied, "Cut the number of standards and the content within standards dramatically." Ainsworth recommends a prioritized set of standards and indicators that show that students can utilize higher-order thinking skills and can integrate new learning with prior knowledge. The recent introduction of the more focused Common Core State Standards reflects the national recognition of the problem with the previous standards of many states which were often a mile wide and an inch deep (Common Core Standards Committee, 2014).

Standards-based grading should present a picture of students' performance along a continuum toward mastery of a grade level standard. The report of performance should connect that standard to the essential skills the student will need to be college and career ready upon graduation. To meet that purpose, report cards should be presented in parent-friendly and student-friendly language that clearly identifies achievement targets and promotes parent partnership in future learning (Stiggins, 2005, Lalley & Gentile, 2009).

Resistance and Transforming the Culture

While educational leaders approach innovation with a vision for improvement in student achievement, stakeholders sometimes approach innovation with a sense of cynicism, apathy, or even dread. New experiences are always reacted to initially in the context of some "familiar, reliable construction of reality" (Fullan, 2001). Teachers and families bring a vast array of realities to the context of changes to report cards. The introduction of standards-based grading put teachers and families into a state of imbalance. Parents, teachers, students, and community members do not want to release their hold on the familiar letter grading system despite the evidence that letter grades are arbitrary (Marzano & Kendall, 1996). Ultimately, to make substantial modifications in "report cards, a district or school must transform its culture from one in which individual teachers develop their own idiosyncratic methods of grading to a culture in which grading, and reporting is uniform from teacher to teacher and subject to subject" (Marzano, 2006).

The reporting of student performance on individual standards does make for a dramatic change in the type of grading systems that are issued by a school (Marzano & Kendall, 1996). In some cases, this change has been met with such resistance that districts have reverted to the traditional grading systems (Marzano & Kendall, 1996). While research indicates a need for a change, the reform presents a unique challenge for leaders. Engaging teachers, families, and students in a process to embrace that challenge is a difficult undertaking.

Given the level of resistance to standards-based grading for parents, teachers, students, and communities there is a need for more evidence that connects this type of grading to student performance improvements on accountability measures of those same standards. The researcher hopes to add to a growing number of positive studies regarding the benefits of standards-based

grading and the impact it can have on student achievement and student motivation, which can influence self-efficacy. Increased pressure for accountability, combined with increased capability to report and track student and school data, suggest that standards will continue to be essential to the educational process. As schools implement standards-based curriculums and align grading practices to the standards, there is a clear paradigm shift in thinking of grading.

Summary

Traditional grading and report cards do not promote self-efficacy or motivation for most children. Poor grades do not build a student's belief in his or her own ability to learn content, do not create a sense of self-efficacy; and will result in decreased motivation to continue striving to learn. Yet teachers continue to issue failing grades with the belief that the fear of a failing grade will somehow motivate students to improve (O'Connor, 2011).

A system of standards-based grading system that removes the concept of failure is one positive step toward sustaining a student's belief in his or her capacity to learn. The letter grades students receive are not always reflective of a student's mastery of content but may be more of an assessment of compliance and social skills. The report of performance should connect each standard to the essential skills the student will need to be college and career ready upon graduation. In order to meet that purpose, grading should be presented in parent-friendly and student-friendly language that clearly identifies achievement targets and promotes parent partnership in future learning (Betts, 1998).

School districts can differ drastically on the reporting tool used to provide information to families. There may be several performance levels, one overall grade or average, or a multitude of individual standards. Reports of grade formats range from the traditional archaic form of the past 50 years, which depicts the familiar letter grade in each of the content areas of math,

reading, writing, science, and history, to the multi-page standards-based reports that indicate student performance on multiple indicators within each strand and content area. McTighe and Thomas (2003) reported their analysis of grading practices revealed a process that varied so widely that traditional means of grading and traditional report cards were not considered to be reliable measures of achievement and progress. School district leaders are struggling with the development of one easily understood tool that gives a meaningful report of learning to parents, students, teachers, and the community (Warrick, 2014).

Standards-based educational practices for the twenty-first century must be embraced to promote an informed student body capable of accomplishing future-directed goals (Bagley, 1939; Bandura, 2001; Friedman, 2005; Hirsch, 2007; Stiggins, 1997; Stiggins, 2005; Stiggins & Chappuis, 2008; Grusec, 1992). As districts ask parents, teachers, students, and the community to support a change in a reporting tool that is so engrained in society, it is essential to have data that indicates that the tool will impact student learning and student performance on accountability measures. Impending realignment to the newly revised *Tennessee TN Ready State Standards* for both mathematics, and English language arts and literacy, will mean that schools will revisit standards-based report cards and standards-based grading for revisions that reflect alignment to the new curriculum and the new national assessments more frequently. The use of standards-based grading from the earliest grades to promote self-efficacy and motivation in children will build children's perceptions of themselves as capable learners and inspire hopefulness for continuing along a procession toward higher levels of achievement (Greenstein, 2015).

CHAPTER THREE

Methodology

The first two chapters presented how standards-based grading (SBG) is gaining momentum in the school system as a result of the shift toward increased testing and accountability. The emphasis on preparing all students for post-secondary education has caused educators to rethink the purposes of grades as well as the methods by which those grades are determined. Many teachers have begun using it with the hope of improving student achievement by emphasizing mastery learning as opposed to point-collecting.

The basic premise of SBG is that grades should reflect what a student has learned rather than serving as a tally to the amount of points a student has accumulated during a period of time (Brookhart, 2011). It follows that a shift in student focus, from point accumulation to mastery learning, should result in improved measures on student achievement. While some evidence supports the use of SBG to improve student achievement in elementary school (Craig, 2012; Crooks, 1988) the research for its use at the middle school and high school level is sparse. Given the importance districts and political leaders are placing on student performance, it is essential to consider reform efforts on grading practices from an empirical perspective.

This study was conducted using a *t*-test comparison design. The treatment in the studies consisted of a pre/post-test application of using standards-based grading within the ELA curriculum with sixth and seventh grade students. The researcher allowed the teacher to assess the mastery level of sixth and seventh grade students by using a state approved standardized practice test developed by Tennessee called the TN Ready Practice Assessment. There was a

treatment group that received feedback of their performance with standards-based grading and a control group in which the teacher only gave feedback with traditional grades. The Tennessee TN Ready Practice test for ELA standards was utilized to measure student achievement differences between the treatment group and the control group. The academic self-efficacy scales were compared between the two groups to identify the level of impact using the MLSQ questionnaire.

Research Participants and Setting for the Study

The research participants consisted of sixth and seventh grade students in ELA classes in two rural middle schools. This involved approximately fifty-five sixth grade students and approximately eighty-eight seventh grade students. Of this group, a sample of twenty-two students were chosen from the sixth grade to be the treatment group with the remainder of thirty-three students were in the control group. Within the seventh grade, a sample of fifteen students was chosen for the treatment and the remainder of the seventy-three were in the control group. The control group of students did not receive grading feedback with standards-based grading practices while the rest were graded using the standards-based grading system. The TN Ready Practice test results for sixth and seventh grade ELA students was compared between the control group and the treatment group to identify the level of impact that the standards-based grading had on student achievement. Both the control group and the treatment group received a pre/posttest in their specific grade level of ELA using TN Ready state assessments and using a self-efficacy questionnaire (MLSQ) and their results were compared. The demographics of the research sites consisted of rural and economically disadvantaged students in sixth and seventh grades within two middle schools in the same school district located in the southeast region of

the state of Tennessee. Both schools were similar in demographic populations regarding students with disabilities, socio-economic levels, and similar racial diversity (See Appendix E).

Both principals as well as the teachers involved agreed to participate in the study. One school had 65.4% at the poverty level who were eligible for free or reduced lunch status. The other school had a similar rate of 64.8%. One school had an ELA teacher with eight and a half years of experience in teaching ELA classes and another with eight years of experience. The other school had a teacher who has eight and a half years of experience teaching ELA classes and the other teacher had nine years of experience. The percentage of students with disabilities was similar when comparing the two schools; with one school having 10% and the other with 11% in grades 5-8. Racial diversity was also very comparable at both schools. One school had a population of 3% for African-American students, 1% Indian students, and 4% Hispanic. The other school had 2.5% of African-American students, 1% Indian students, and 3% Hispanic students.

Instruments

To understand how standards-based grading impacts student achievement and self-efficacy, the researcher developed specific tools to utilize during the study. Two years ago, the state of Tennessee developed item sampler practice tests for each core subject to prepare students for the transition from the prior state assessment called TCAP (Tennessee Comprehensive Assessment Program) which had older standards that were not aligned to national norms. This new standardized test was called TN Ready and was better aligned to the more rigorous set of standards developed by the state. This instrument became the assessment piece to measure student achievement before the four-week grading period and immediately following it. The control group and the treatment group were given the same assessment in their sixth and seventh

grade ELA classes. This test was used to gather mean achievement scores between both the treatment group and the control group. In addition to the treatment tool, the participants also completed the *Motivated Strategies for Learning Questionnaire (MSLQ)* which is an academic self-efficacy scale that has been used in previous research studies. The results of this instrument were analyzed using a *t*-test to examine the level of correlation between the pre and post responses for the treatment group and the control group. Reliability generalization studies were conducted on the motivation and learning strategies scales of the *Motivated Strategies for Learning Questionnaire* (MSLQ) to typify score reliabilities for all scales on the instrument and to examine potential sources of measurement error across studies which used these scales. Average reliability coefficients ranged from a low of .61 for the learning strategies scale, help seeking, and a high of .88 for the motivation scale, self-efficacy of learning and performance. Overall, results of reliability generalization studies for both the motivation and learning strategies sections of the MSLQ demonstrated that the MSLQ can be used across a variety of different samples with reasonable confidence for obtaining generally reliable scores (Rosa Stoffa & Joseph Kush, 2010). The newly aligned state assessment called TN Ready, has been shown to be reliable and valid in the assessment items, test design, test bias, and performance measures within the grade bands of 3-8 in four academic areas of curriculum (Tennessee Department of Education, 2016).

Pilot Study

The academic self-efficacy scale that was used had been used in previous studies and had been tested for validity. The self-efficacy scale used was the *Motivational Strategies for Learning Questionnaire (MSLQ)* which was used in a study that examined middle school students in reading and English (Piercey, 2013). The MSLQ had a reliability $\alpha = .89$ for self-

efficacy, an intrinsic value $\alpha = .89$, a test anxiety $\alpha = .75$, a cognitive use $\alpha = .83$, and a self-regulation $\alpha = .74$. A free copy of the questionnaire was available via a website (Strive Together, n.d.) that curate's various academic self-efficacy scales for use in research.

Data Collection Procedures

The data collection process for the academic self-efficacy scales was number coded in order to protect student privacy rights. All students in the sixth and seventh grade ELA classes of both the treatment group and the control group received this instrument twice. The treatment group received the instrument before their teacher's use of giving standards-based grading feedback and then after the four weeks, those same students who received feedback with the use of standards-based grading took the assessment again. The control group received the academic self-efficacy scales at the same time as the treatment group with the same frequency, but the control group did not receive grading feedback with the use of standards-based grading, but rather traditional grades as usual.

Lastly, the TN Ready Practice test for sixth and seventh grades in the ELA classes was collected in the form of four achievement levels for both groups, and a comparison of their performance levels on the state of Tennessee's practice test was analyzed for significance in variation between the control group and the treatment group. This study occurred during the third nine weeks of school in the district during the months of February through March. Standards-based grading was used for the treatment group over the course of the four-week grading period for all assignments in the ELA class. The students who received traditional methods of grading completed the normal number of graded assignments as well, but their teacher only gave them traditional forms of grades during the four-week grading period.

Data Analysis

The data analysis was quantitative, and a software program called SPSS was used to perform statistical test on the data collected; SPSS means Statistical Package for the Social Sciences and was first launched in 1968. Since SPSS was acquired by IBM in 2009, it's officially known as IBM SPSS Statistics, but most users still just refer to it as SPSS. SPSS is software for editing and analyzing all sorts of data**.** These data may come from basically any source: scientific research, a customer database, Google Analytics, or even the server log files of a website. SPSS can open all file formats that are commonly used for structured data such as

- spreadsheets from MS Excel
- plain text files (.txt or .csv);
- relational (SQL) databases;
- Stata and SAS.

For the academic self-efficacy questionnaire, a coding scheme was utilized and statistical tests employed to analyze the level of impact that standards-based grading had on self-efficacy which consisted of a *t*-test in order to determine if there was a correlation between the use of standards-based grading and students' level of self-efficacy; visuals and graphs were created in order to better analyze the data for trend patterns.

To determine the level of significance of the mean growth scores between the treatment group and the non-treatment group on the TN Ready Practice test, the *t*-test was used. The mean growth scores for achievement on the pre and posttest between the treatment group and the non-treatment group were collected and analyzed. The *t*-test was utilized to determine if there was a significant difference in the mean growth scores of those students who received standards-based grading versus those students who did not receive standards-based grading. The reason for the use of the *t*-test was to determine whether the differences that occur were due to random chance

or if the group mean growth scores were statistically significant despite the sample size of students enrolled in sixth and seventh grade ELA classes at the middle school level.

There were four levels of proficiency associated with the state assessment, TN Ready: Below Basic, Basic, Proficient, and Advanced. In 2017, these levels of performance changed and received labels of Basic, Approaching, On Track, and Mastery (Tennessee Department of Education, 2016). These levels were used to determine mastery levels of the students who participated in the study using the TN Ready assessment in sixth and seventh grade.

Ethical Issues

Confidentiality procedures were in place to protect student privacy rights. Each student was assigned an achievement portfolio in which he or she filed each standards-based assessment scoring guide after use. These portfolios were secured within the ELA teachers' classrooms using locked file cabinets, and only the researcher had access. The portfolios were number coded for anonymity. Before the treatment began, a letter explaining the purpose of the study was sent to the teachers involved in the study (See Appendix A) as well as to parent(s)/guardian(s) of each student to read and sign if they agreed to allow their child to participate (See Appendix B). An official IRB form was obtained, completed, and filed with the university. There also was a form for the researcher to acquire permission to conduct the study from school supervisors and the director of schools for the district.

Chapter Three has outlined the methodology of the study and specifically identified the setting, the participants, and data gathering pieces involved. It also discussed the types of instruments used, the way data was collected, and how the data was analyzed after the study is completed.

CHAPTER FOUR

Data Analysis

Data Findings

In reviewing the problem associated with grading in middle school settings, according to recent surveys over the last three years, the majority of teachers and leaders want to have grades that accurately reflect applicative or conceptual student learning, as opposed to rote or recall learning (Hanover Research, 2015). The goal of the standards-based grading system is to prioritize learning over compliance. Standards-based grading "prioritizes the result of learning instead of the usual summation of grades earned during the learning process" (Thieman, 2000).

In Chapter One, the problem regarding the many issues facing traditional grading practices in education was outlined. The purpose of the study was to determine if using standards-based grading with middle school students would impact student achievement and self-efficacy as compared to students who received traditional grading practices. The data collected from this study adds to the existing body of knowledge on the impact of standards-based grading at the middle school level and the effects it has on academic self-efficacy of those students, particularly in ELA core classrooms of rural areas.

Chapter Two provided an in-depth review of literature associated with SBG practices and the results it had on student achievement and self-efficacy from previous studies. The theory most associated with the studies was that of Albert Bandura. When looking at the effects of motivation with students and their ability to learn, one must examine the social cognitive theory, posited by Bandura, which explained that people learn their behaviors by observations within social settings. It has given rise to a deeper understanding of how humans develop their

individual beliefs of their own capabilities to succeed. A historical perspective of grading practices was presented, and the many trends affiliated with each practice. The use of traditional grading seemed to emerge to the forefront of each time frame due to its simplicity for teachers, lack of resistance from parents, and basic understanding of the process by students. Until the curriculum drastically changed over the last four years with the transition to standards-based instruction, it was still thought to be the grading process of choice. When the curriculum changed, delivery methods changed along with it, but grading practices were still grounded under the former traditional grading process. This has brought many new ideas and initiatives into discussion at the middle school levels dealing with the idea of using SBG.

Chapter Three has outlined the methodology of the study and specifically identified the setting, the participants, and data gathering pieces involved. Also discussed were the types of instruments used, the validity of the instruments, the way data was collected, and how the data was analyzed after the study was completed. The procedures for grading the assessments and administering the surveys were also discussed in detail as well as ethical considerations for the study.

In Chapter Four, the methods and results of the study were shared and explained. First, the teachers in both the treatment groups and the control groups were asked to administer a pre and posttest using the Tennessee TN Ready Practice Test (See Appendix C) for their grade level, whether it was sixth or seventh grade. The treatment teachers administered the test and then gave feedback specifically to the students on the incorrect answers and the reasoning why they chose the incorrect answers as this mimics their method of current SBG in their classrooms. The control teachers were to administer the test and give a number grade of percentage correct, but with no further explanation, as is the routine in their traditional grading process. After the pretest

was administered, the posttest was given after four weeks of instruction. During this same time, the control groups were given traditional grading, with no other change. The treatment group and the control group completed the MLSQ self-efficacy survey on a separate day following the pretest. After the end of the four weeks, the treatment and control groups were administered the post survey using the same MLSQ survey.

The first research question asked: 1) Does the use of standards-based grading impact student achievement in ELA classes of middle school students in grades six and seven? The results of this study revealed evidence to support the hypothesis that using SBG would impact both student achievement and student self-efficacy.

The students in the treatment group that received SBG totaled twenty-two for the sixth grade and fourteen for the seventh grade at the treatment school. The control group consisted of twenty-nine students from the sixth grade and sixty-four students from the seventh grade. The pre/post-test consisted of 29 questions in ELA content at their designated grade levels. Both groups were also given a self-efficacy scale survey (MLSQ) that measured their motivation and feelings of how they thought they approached studying and classwork as well as test preparation. This survey consisted of 81 questions, with a focus on eight of the selected questions specifically associated with academic self-efficacy. Each group's achievement on both the pretest and posttest was measured from both grade levels. Raw scores from the number correct on the assessment for each group were recorded for analysis using a paired *t*-test for each grade level. This chapter will detail the results of the test administrations and the surveys given along with their results.

Student Achievement Data

The paired *t*-test for each groups' pretest versus posttest was employed to determine if there was a significant difference in pretest versus posttest scores for the treatment group or the control group. This was necessary to address the first research question of this study: Does the use of standards-based grading impact student achievement in ELA classes of middle school students in grades six and seven?

The first research question stated above explored the impact of student achievement when teachers gave standards-based grades to students after they had taken a practice test. For the treatment group, the paired *t*-test analyzed the differences in pre-test and posttest achievement scores (See Table 4.1). *In each data point, (M=Mean score and the SD= Standard deviation*. The posttest achievement scores for the treatment group in sixth grade (M=24.57, SD=4.30) were greater than the pretest achievement scores (M=16.28, SD=4.72). Based on the t-stat value being much higher than the t-critical value and the p-value being much less than α=0.01, the initial hypothesis was supported. Therefore, there was a significant difference between the treatment group's pretest achievement scores and its posttest achievement scores. The same held true for the treatment group seventh grade with posttest achievement scores (M=23.23, SD=3.53) and the pretest achievement scores being (M=13.07, SD= 6.33).

For the control group the paired *t*-test analyzing the difference in pretest and posttest are given in (Table 4.2 below). Each student was measured for changes from his or her pretest and posttest. The posttest mean achievement scores of the control group in sixth grade (M=18.78,

Table 4.1

Treatment Group Achievement Scores for Sixth and Seventh Grades

Treatment Group Achievement for Sixth Grade: *t* test paired

	Post Test	*Pre-Test*

Mean	24.57142857	16.2857143
Variance	19.85714286	23.5142857
Observations	21	21
Hypothesized Mean Difference	0	
df	20	
t Stat	10.52517759	
P(T<=t) one-tail	6.6438E-10	
t Critical one-tail	2.527977003	
P(T<=t) two-tail	1.32876E-09	
t Critical two-tail	2.84533971	

Treatment Group Achievement for Seventh Grade: *t* test paired

	Post Test	*Pre-Test*
Mean	23.23076923	13.07692308
Variance	12.02564103	39.24358974
Observations	13	13
Hypothesized Mean Difference	0	
df	12	
t Stat	8.63526261	
P(T<=t) one-tail	8.52628E-07	
t Critical one-tail	2.680997993	
P(T<=t) two-tail	1.70526E-06	
t Critical two-tail	3.054539589	

SD=4.41) were more than the pretest achievement scores (M=16.46, SD=5.02). There was evidence of some growth in that the sixth-grade control group scored slightly higher on the posttest than they did when given the pretest. The difference seemed to be a significant increase and indicated the students performed better on the posttest. The posttest mean achievement scores of the control group in seventh grade (M=16.76, SD=4.3) did reveal some growth from

pretest to post in achievement scores but only a small increase from the pretest (M=15.39, SD=5.1) When compared to the sixth-grade control group, they showed much less increase in achievement (See Table 4.2)

Table 4.2

Control Group Achievement Scores for Sixth and Seventh Grades

Control Group Achievement for Sixth Grade: *t* test paired

	Post Test	*Pre-Test*
Mean	18.78571429	16.46428571
Variance	19.06349206	24.48015873
Observations	28	28
Hypothesized Mean Difference	0	
df	27	
t Stat	7.131495326	
P(T<=t) one-tail	5.7127E-08	
t Critical one-tail	2.472659912	
P(T<=t) two-tail	1.14254E-07	
t Critical two-tail	2.770682957	

Control Group Achievement Scores for Seventh Grade: *t* test paired

	Post Test	*Pre-Test*
Mean	16.76190476	15.3968254
Variance	19.15207373	26.01740911
Observations	63	63
Hypothesized Mean Difference	0	
df	62	
t Stat	5.057130388	
P(T<=t) one-tail	2.02074E-06	
t Critical one-tail	2.388010775	

P(T<=t) two-tail	4.04148E-06
t Critical two-tail	2.657478565

Self-efficacy Quantitative Data

The second research question for this study was to investigate the impact of standards-based grading on student academic self-efficacy. How does the implementation of standards-based grading practices into sixth and seventh grade ELA classes impact students' feelings of academic self-efficacy? Using the MLSQ as the scale, the self-efficacy scores revealed there was a significant difference in the pre-survey when compared to the post survey measuring self-efficacy of the treatment group. To measure the impact, this study utilized the self-efficacy subscale, (See Table 4.3), from the MLSQ, which had previously been used in the Pintrich and De Groot (1989) study.

The survey consisted of eighty-one questions associated with student motivation and attitudes as well as with student learning strategies. The questionnaire consisted of these questions on a seven-point Likert scale. Each student that participated in this study completed the questionnaire twice in a pre and post survey format. The questions were rated on a scale of one to seven with one being "not true of me" and seven being "very true of me." The mean total score for each student was calculated and recorded in an Excel spreadsheet for analysis using paired *t*-tests for each group in sixth and seventh grades. Pre-survey responses were compared to post survey responses and an independent *t*-test between each student in the treatment group and the control group was analyzed for significant differences.

The treatment groups' post survey scores for sixth grade on MLSQ was (M=5.79, SD=0.85) was compared to the treatment groups' pre-survey MLSQ score (M=5.13, SD=0.94) using a paired *t*-test to determine if the difference was significant (Table 4.3). Based on the

increase in the mean scores from pretest to posttest the results showed that self-efficacy was positively impacted using standards-based grading feedback. Therefore, there was a significant difference between the treatment groups' pre-survey MLSQ scores and their post survey scores on the MLSQ. The same was true for seventh grade survey scores on the post survey MLSQ (M=5.83, SD=1.03) compared to their pre-survey (M=4.88, SD=1.44) using a paired *t*-test to determine if the difference was significant (Table 4.3).

Table 4.3

Treatment Group MLSQ Scores on from Pre-Survey to Post Survey for Grades Six and Seven

Treatment Group Self-Efficacy MLSQ Sixth Grade: *t* test paired

	Post Survey	*Pre-Survey*
Mean	5.821428571	5.647321429
Variance	0.714616402	0.898210152
Observations	28	28
Hypothesized Mean Difference	0	
df	27	
t Stat	1.99997565	
P(T<=t) one-tail	0.027827605	
t Critical one-tail	2.472659912	
P(T<=t) two-tail	0.05565521	
t Critical two-tail	2.770682957	

Treatment Group Self-Efficacy MLSQ Seventh Grade: *t* test paired

	Post Survey	*Pre-Survey*
Mean	5.83653846	4.88461538
Variance	1.16766827	1.88922276
Observations	13	13
Hypothesized Mean Difference	0	
df	12	
t Stat	5.6334327	

P(T<=t) one-tail	5.5067E-05
t Critical one-tail	2.68099799
P(T<=t) two-tail	0.00011013
t Critical two-tail	3.05453959

Next the sixth-grade control group's post survey scores on MLSQ (M=5.82, SD=0.82) were compared to the sixth-grade control groups' pre-survey MLSQ score (M=5.64, SD=0.92) using a paired *t*-test to determine if the difference was significant. This suggested that the control groups' self-efficacy was somewhat impacted during this period (See Table 4.4). The seventh-grade control group's post survey scores on MLSQ (M=5.19, SD=1.08) were compared to the seventh-grade pre-survey scores on MLSQ (M=4.96, SD=1.22). This group did increase somewhat in their self-efficacy scores.

Table 4.4

Control Group MLSQ Scores on from Pre-Survey to Post Survey for Grades Six and Seven

Control Group Self-Efficacy MLSQ Sixth Grade: *t* test paired

	Post Survey	*Pre-Survey*
Mean	5.821428571	5.647321429
Variance	0.714616402	0.898210152
Observations	28	28
Hypothesized Mean Difference	0	
df	27	
t Stat	1.99997565	
P(T<=t) one-tail	0.027827605	
t Critical one-tail	2.472659912	
P(T<=t) two-tail	0.05565521	
t Critical two-tail	2.770682957	

Control Group Self-Efficacy MLSQ Seventh Grade: *t* test paired

	Post Survey	*Pre-Survey*
Mean	5.19642857	4.9623016
Variance	1.17777938	1.4443724
Observations	63	63
Hypothesized Mean Difference	0	
df	62	
t Stat	3.17775341	
P(T<=t) one-tail	0.00115758	
t Critical one-tail	2.38801077	
P(T<=t) two-tail	0.00231517	
t Critical two-tail	2.65747856	

To conclude that the use of SBG impacted the treatment group more significantly than the control group, an analysis was done to determine if there was an increase in the treatment group that surpassed the control group in both the measures of student achievement as well as their scores on academic self-efficacy. This comparison was done using an additional *t*-test for both the student achievement and self-efficacy (See Table 4.5 and Table 4.6).

The data revealed that there was much greater growth and improved achievement for students in the treatment group when compared to the control group with the student achievement test. This was determined by figuring the gains made from the pretest to the posttest and then running a *t*-test to compare. The treatment group gain score was (M=8.23, SD=3.48) and the control group gain score was (M=2.32, SD=1.67). This was measured with a *t*-test assuming unequal variance

Table 4.5

Comparison of Student Achievement in Sixth and Seventh Grades between the Two Groups

Sixth Grade *t* test: Two-Sample Assuming Unequal Variances

	Treatment	*Control*
Mean	8.238095238	2.321428571
Variance	13.29047619	2.966931217
Observations	21	28
Hypothesized Mean Difference	0	
df	27	
t Stat	6.883374816	
P(T<=t) one-tail	1.07065E-07	
t Critical one-tail	2.472659912	
P(T<=t) two-tail	2.14129E-07	
t Critical two-tail	2.770682957	

Seventh Grade *t* test: Two-Sample Assuming Unequal Variances

	Treatment	*Control*
Mean	10.15384615	1.365079365
Variance	17.97435897	4.590373784
Observations	13	63
Hypothesized Mean Difference	0	
df	13	
t Stat	7.284855296	
P(T<=t) one-tail	3.06872E-06	
t Critical one-tail	2.650308838	
P(T<=t) two-tail	6.13743E-06	
t Critical two-tail	3.012275839	

due to difference in the number of participants. This same procedure was done for seventh grade and was similar with a much more distinguishing difference in this grade. The treatment group in seventh grade scored (M=10.15, SD=4.06) and the control group scored (M=1.36, SD=2.35)

The data indicated that the treatment groups' responses on the MLSQ trended more

toward the middle and upper end of the scale, both for the pre-survey as well as the post survey. In addition, the post survey responses were generally higher than the pre survey responses regarding all questions for both the sixth and seventh grade treatment groups. The treatment group gain for sixth grade on the MLSQ was (M=0.63, SD=0.41) and the control group gain on the MLSQ was (M=0.19, SD=0.43). The seventh grade treatment gain on the MLSQ was

Table 4.6

Comparison of Student Self-Efficacy in Each Grade between the Two Groups

Sixth Grade *t* test: Two-Sample Assuming Unequal Variances

	Treatment	*Control*
Mean	0.63452381	0.191964286
Variance	0.187842262	0.205419147
Observations	21	28
Hypothesized Mean Difference	0	
df	44	
t Stat	3.46838726	
P(T<=t) one-tail	0.000591488	
t Critical one-tail	2.414134368	
P(T<=t) two-tail	0.001182975	
t Critical two-tail	2.692278266	

Seventh Grade *t* test Two-Sample Assuming Unequal Variances

	Treatment	*Control*
Mean	0.951923077	0.235714286
Variance	0.37119391	0.340982143
Observations	13	63
Hypothesized Mean Difference	0	

df	17
t Stat	3.886142936
P(T<=t) one-tail	0.000593423
t Critical one-tail	2.566933984
P(T<=t) two-tail	0.001186845
t Critical two-tail	2.89823052

(M=0.95, SD=0.69). The control group in seventh grade had a gain on the MLSQ of (M=,0.23 SD=0.58). This *t*-test was conducted with two sample means assuming unequal variance due to the different number of students in each group.

The treatment group also showed an increase in self-efficacy gains from pre-survey to post survey responses against themselves on the MLSQ questionnaire as compared to the control group's gains on the survey responses against themselves of the MLSQ. Both control groups seemed to show only a slight increase in in the sixth and seventh grades for gains in self-efficacy, but their gains were not as great as the sixth and seventh grade treatment groups.

Conclusion

This study investigated the impact that SBG had on student achievement and their self-efficacy in grades six and seven ELA classes. This study was conducted in 2018 over a four week period in two rural, economically disadvantaged middle schools in southeast Tennessee. The researcher was interested in determining the level of significance of impact on student achievement and student self-efficacy regarding receiving standards-based grading as compared to students receiving traditional grading practices. The research questions were:

1) Does the use of standards-based grading impact student achievement in ELA classes of middle school students in grades six and seven?

2) How does the implementation of standards-based grading practices into sixth and seventh grade ELA classes impact students' feelings of academic self-efficacy?

Both research questions were tested with grades six and seven treatment groups receiving SBG and the same grade levels receiving traditional grading practices as the control group over a four-week period. Both the treatment group and the control group were assessed for achievement using the standardized practice test for their grade level with the TN Ready Practice Test in the subject of ELA. Participants' pretests and posttests were collected at the beginning and the end of the four-week grading period by their respective grade level ELA teachers and given to the researcher. Their scores were collected and placed in an Excel spreadsheet for analysis.

Chapter Five discusses the implications of the data analysis in Chapter 4 with the results of the research. Chapter Five makes some recommendations for future studies and suggestions on ways to use other data pieces to make decisions about the use of SBG in the middle school setting. In addition, the final chapter summarizes the study and discusses the findings revealed in Chapter Four.

CHAPTER FIVE

Conclusions, Implications, and Recommendations

Introduction

This study focused on assessing the impact of using standards-based grading feedback to improve student achievement and self-efficacy among sixth and seventh grade students in ELA classes. The participants were not grouped by ability and had a similar ratio of low, middle, and high achieving students in both the treatment and control groups. Both schools have full inclusion in their sixth and seventh grade classrooms of ELA. The study examined the significance in impact that occurred when students received feedback through standards-based grading practices as compared to their counterparts who received feedback via traditional means. The dependent variable in this study consisted of student achievement on a standardized assessment, and student academic self-efficacy as evidenced by student responses on the Self-efficacy scale: *Motivated Learning Strategies Questionnaire* (See Appendix D). Study participants from a total treatment group (36) and a total control group (93) were given the MLSQ twice, once before the four week grading period, and once when the four week grading period ended. The lack of parity is due to the treatment group being somewhat smaller and some of the participants' parents did not give permission for them to participate in the study. A few other factors impacting participation and leading to some disparity was an unforeseen flu illness at the treatment school, as compared to the control school. Both groups received the TN Ready practice test for their grade level in ELA before and after the four week grading period. Study participants' responses on the MLSQ and the scores made on the state practice assessment were

recorded using an Excel spreadsheet. The teachers did not change delivery of instruction, nor their curriculum standards for this grading period. The research questions were as follows:

1) Does the use of standards-based grading impact student achievement in ELA classes of middle school students in grades six and seven?
2) How does the implementation of standards-based grading practices into sixth and seventh grade ELA classes impact students' feelings of academic self-efficacy?

Participants in the Current Study

This study was conducted in a rural, economically disadvantaged district with two middle school schools participating in the study. There were four teachers involved in the study, two at each school. The schools had a grade configuration of 5-8 making up their middle school grades. The grade levels tested consisted of grades six and seven only. The study only measured the achievement and self-efficacy for participants in the ELA classes at each school. Of the total 129 students who participated in the study 36 were included in the treatment group and 93 were included in the control group (See Appendix E).

The treatment group received standards-based grading during a four week period while the control group continued to receive their usual traditional grading procedures during this time. The two teachers at the treatment school had been trained in the use of SBG and had been delivering this method of grading for several assignments they had made this year, prior to this study beginning. Each group of students was administered the TN Ready Practice Test and the MLSQ Self-efficacy scale at the beginning and at the end of the four week period.

To address the answer to the first research question, the achievement scores of the pretest and the posttest for each group were analyzed using the paired *t*-test for each group. The variance was determined to be unequal due to some of the data being affected for the pretest and posttest

participants because some were absent at the time the assessments were given, so their data was incomplete. The treatment school was impacted by some of the students being absent due to sickness during the administration of the pretest and pre survey, therefore not being able to fulfill the entire population to be included in the study. This was a recognized limitation after the data was gathered but was out of the researcher's control.

Similar Studies Related to Current Study

As mentioned in Chapter Two, other research studies have revealed that the main difference in achievement is the difference in how someone is motivated. Some people are motivated to learn, while others are motivated to perform well and get a good grade, and other rewards (Guskey, Swan, & Jung, 2011). The North Spencer School Corporation in Indiana (Tassell, Kemp, Litkenhus, & Schriefer, 2006) adopted SBG in its elementary schools (grades K-6) after reviewing student performance on the state-mandated Indiana Statewide Testing for Educational Progress Plus (ISTEP+) standardized test and student grades, specifically focusing on the students who did not pass the test. In 2001-2002, 53% of students who earned an A or B failed the English/language arts portion of the ISTEP+. After implementing SBG in 2004-2005, only 32% of students who were reported either at or above grade level failed the same portion of the test (Tassell et al., 2006). This study is in reference as a supplement to the current study to reference the use of SBG influencing achievement in a positive way

A similar study confirmed the same findings in middle schools in Northern Georgia. Hardegree (2012) analyzed fifth-grade students in eight elementary/middle schools in North Georgia to determine whether grades on SBG report cards would provide an accurate measure of the grades received on a standardized criterion-referenced test. This study was of specific importance to the researcher as it was aligned to the middle school level as was the case of this

study. As shown in the study, this Georgia school had implemented the SBG into their reading and math classes; it was revealed that students who received SBG classroom grades of "meeting standards" scored higher on the test than those who received grades of "not meeting," while students with grades of "exceeding standards" outscored both of the other groups. This information was similar in data that supported the hypothesis of using SBG to increase student achievement in the researcher's current study.

Specific feedback can improve student performance by making students more aware of their abilities in relationship to the standards, by providing students cues and hints on how to improve, and by helping them understand that they are capable of learning. Kluger and DeNisi found in their 1996 meta-analysis that the most effective feedback focuses on specific learning goals and when it is focused upon what students did correctly rather than on incorrect responses. Brookhart, (2000) specifically found that when students receive informative feedback explaining both strengths and weaknesses, they are more likely to demonstrate higher levels of intrinsic motivation towards the task at hand than those receiving just a grade, thus boosting their feelings of self-efficacy.

As indicated in Chapter Four, the researcher's results have followed this same pattern and result. The students in the treatment group who received specific feedback through SBG did much better on student achievement when their posttest was compared to their pretest. The control group showed evidence of slight increases in some of their scores on achievement. This could be interpreted by the fact the control group was not given specific reasoning or academic feedback related to their incorrect responses on the pretest, thus not resulting in significantly higher scores on their posttest.

The second research question concerning the impact of using standards-based grading on student self-efficacy was addressed using the *t* test. The MLSQ instrument was used to measure the impact of standards-based grading on student self-efficacy and was administered twice as a pre-survey and a post-survey measurement.

Conclusions

Student Achievement-The paired *t* test resulted in showing a significant difference in pretest and posttest achievement performance on the TN Ready practice test for both grade six and seven in the ELA classes for the treatment group. The increase revealed that the use of standards-based grading did have a significant impact on student achievement scores in both the sixth and seventh grade ELA classes. However, the difference was not as pronounced for either of the control groups. Both control groups showed a slight increase in achievement scores between the pretest and the posttest; however, they did not show a rate of improvement on achievement to the extent as was indicated with the treatment group. When the two groups were compared to each other instead of just against themselves, a much more pronounced difference was shown (Table 4.5).

Students who generally perform well in school tend to view assessment and grading as evidence of their success. They are likely to seek challenges, take risks, and interpret assessment as opportunities to gain feedback. They tend to persevere during setbacks and accept responsibility for their results (Artino, 2012). Each of these feelings leads to more success and a positive cycle develops. In contrast, students who do poorly in school view assessments as evidence of their failures. Instead of accepting new challenges and taking risks, these students feel hopeless and seek the easiest options. Rather than developing perseverance, and improving

academic self-efficacy, they learn to retreat, avoiding initiative. These students fall into a negative cycle leaving them in a state of frustration, fear, and defeat (Stiggins, 2007).

Student Self-efficacy-The paired *t*-test measuring the differences of the responses on the MLSQ for the treatment group demonstrated marked improvement on the MLSQ scores with trends being on the positive end of the Likert scale. The control group's *t* test associated with the MLSQ scores revealed that sixth grade increased slightly with little variance, but seventh grade showed an increase in their scores on the MLSQ scale for self-efficacy with scores moving past the lower to middle range on the Likert scale. In addition, to the results discussed above, the additional statistical test helped show that the treatment group's mean self-efficacy score was significantly higher than the control group's self-efficacy scores moving from lower middle to upper on the MLSQ scale (Table 4.6).

Hattie and Timperley (2007) found that the least effective forms of feedback include programmed instruction, praise, punishment and extrinsic rewards. They also found that there is a negative correlation between extrinsic rewards and task performance and that tangible rewards significantly undermined intrinsic motivation. Greenstein, (2015) concluded that extrinsic rewards work negatively because they remove people for taking responsibility for motivating and regulating themselves. This supports the hypothesis that the use of SBG in the classroom impacts student self-efficacy. By influencing self-efficacy, students are intrinsically motivated to do well because they took more ownership in their learning and became more accountable by their own self-regulating tendencies.

Implications

The findings of this study demonstrated the impact of using SBG as means to impact student achievement and improve self-efficacy for sixth and seventh grade students in ELA

classes. The study confirmed the hypothesis posed by the researcher, that students who receive feedback in the form of SBG can experience an increased score in student achievement on an assessment than the control group. It also confirms that students who demonstrate higher self-efficacy feelings on the MLSQ scale experience higher student achievement (Hanover Research, 2015).

Self-efficacy has been studied in various contexts, and it has been repeatedly shown that higher self-efficacy will result in higher student achievement and in turn continues the cycle of regenerating feelings of higher self-efficacy, which continues to produce better achievement (Artino, 2012) . This is particularly important when considering the connection between student self-efficacy and student achievement among middle school students who receive feedback in a standards-based manner versus those students who receive traditional grading feedback.

Because it seems that the use and implementation of standards-based grading impacts student achievement as well as students' feelings of self-efficacy, it is important for educators to develop knowledge and receive effective training in these methods, so they can implement this grading practice with effectiveness and fidelity. It is also crucial for administrators and district leaders to understand the basis for using a standards-based grading protocol in middle school settings. They also need to be educated in the expectations for the training and what SBG entails before making implementation decisions.

It is important to allow students to build self-efficacy and one method of encouraging this is by exposing students to mastery experiences using standards-based grading (Pajares & Urdan, 2006). When students regularly experience mastery of learning outcomes, they begin to develop more pride in their ability to achieve. While participants in both groups of this study showed

increases in their achievement during the four week grading period, the impact of achievement was more prominent for the students who were exposed to SBG practices.

Upon completion of the study, both sets of teachers from the treatment and control groups offered up reasoning as to why they thought their students performed as they did from pretest to posttest. Results of the assessments and the surveys were shared with the teachers by the researcher after the data was collected. The teacher responses were not conducted from a survey issued, but only observations they felt they wanted to share with the researcher. The treatment teachers reported that they could distinguish more specific mastery and the ability to recall information from their students due to the structured feedback system which focused on reasoning for incorrect answers on the tests.

In addition, the treatment group demonstrated increased scores in self-efficacy, whereas the control group only exhibited small increases. The teachers in the control group suggested that because they did not go over the specific reasons that the students chose the incorrect responses but only issued a grade for the tests was probably the cause for their student achievement to demonstrate only slight increases. The control group teachers also believed that because students were not given specific reasoning and feedback for their scores, their students may have had a dip in self-efficacy and lacked motivation to do better.

On the other hand, the teachers in the treatment groups' use of SBG gave the opportunity to those students to receive more specific and targeted feedback to occur between teacher and student in a daily formative manner. This promoted the ability for the student to have a better understanding of the material, more self-confidence, higher motivation levels, and improved self-efficacy; in turn producing a higher achievement score on the assessment as well as a higher self-efficacy score on the MLSQ survey.

The importance of building self-efficacy through mastery experiences and giving specific feedback associated with the progress the student is making about the standards is a critical skill that must be honed by educators to produce the desired effect. Even though SBG has not been fully adopted by middle schools in this school district associated with the study, it stands to reason that the implementation of SBG will be looked at more closely when studying grading trends and patterns for middle school students due to the significant growth and increases in achievement and student self-efficacy that occurred with this study. Furthermore, the results of this study add to the existing research of standards-based grading processes and the ways it can impact student achievement and improve student self-efficacy.

Currently very few studies exist in SBG at the middle school level; most are conducted at the elementary level. An empirical study of why schools do not implement SBG would offer insight on potential barriers and resisting forces to the change. This could lead to more implications for professional development, teacher evaluation processes, and budgetary planning for such a grading program change or a modified grading consideration.

Recommendations

Future studies could benefit from including students from larger populations over more extended periods of time. Studies should also be conducted with students from urban and suburban schools to see if the same data points are revealed as in this current study. This study consisted of a small population of students in a rural district in southeast Tennessee with little ethnic diversity. The same study could be repeated at other schools across the state or country with varying degrees of economic status as well as varying degrees of ethnic diversity.

Another area of future research could include the use of the MLSQ scales in all middle school classrooms to assess the students' feelings of self-efficacy. This would allow educators to

guide their instruction and feedback in a more tailored manner for students who need more attention to boost self-efficacy among those students. This would also foster the ability for educators or counselors to target the at-risk population scoring in the lower ranges on the response averages of the MLSQ.

A correlational study could be conducted to explore the magnitude of using standards-based grading with students over several units of study with other subjects and determine how it can impact females versus males, exceptional education and ELL students, as well as how it may impact students who are economically disadvantaged as compared to students who are not economically disadvantaged, This would add valuable insight in the area of learning differences and the factors that affect these differences, such that the implications of the study could foster improvements in pedagogy, which could be customized to meet the needs of more learners.

Another focus of future research could investigate the impact that using standards-based grading could have on students in different tiers of instruction for RTI (Response to Intervention) purposes. This could be examined in both ELA tier levels and math levels to determine if it can lead to increased student achievement.

Future research could also be conducted to include quantitative studies and analysis of the impact that SBG and increased scores of self-efficacy might have on student attendance rates. Many schools are struggling with attendance issues and concerns for these students regarding how poor attendance impacts academic success. The impact of using SBG could be examined both in public schools as well as private schools and data could be collected to look for trends or patterns that might indicate the need for grading alternatives and implementation of SBG in efforts to produce successful and positive changes.

Another suggestion for future study would be the addition of qualitative data and analysis. This could be conducted by using interviews for students and teachers to gather their thoughts and ideas about SBG. Surveys could be given and examined qualitatively to get a richer picture of what happens with SBG, including successes, barriers, and other external outcomes.

For successful implementation of SBG to occur, the mindset of district level supervisors, school leaders, parents, teachers, and students must transform into one of growth instead of fixed (Dweck, 2014). The district leaders and administrators must be willing to commit to the transition and support it even if there are initial forms of backlash from students, teachers, and parents. Teachers must have the support and necessary training to successfully change their grading practices. Parents need communication that is open with transparency and clarity as the grading systems of SBG begin. Students need individual conferencing as to how this form of grading will impact their achievement, study habits, and ultimately their motivation to learn.

There were many stark differences in the results of this research study with student achievement rates and increases in self-efficacy. The control group only showed slight increases with achievement and only small improvement in self-efficacy scores from pre to post sessions for both instruments. Some contextual reasons this may have occurred and been so distinguishably different may be the level of teacher training in SBG, because the treatment teachers had received several days of focused training in SBG as part of their professional development. When teachers exit preparation programs, they have usually only been trained in traditional grading practices, and SBG seems foreign and too difficult. Another reason may be the students had not experienced SBG since their fourth-grade year; however, when SBG was reintroduced to the treatment group, the students seemed to pick up where they had left off in lower elementary levels with their understanding of how SBG works. There is one definite item

for discussion and future studies and that seems to be the academic wall the middle school students seem to hit when they make the transition to the middle school from elementary school. That was one of the main reasons this study seemed so important to the researcher. There had been a definite trend of the students seeming to struggle more than they should when moving up into the middle school level. Their academic achievement declined, their self-confidence decreased and often tanked with low self-esteem in at-risk levels and their attitudes toward subject content and teachers seemed to be adversely affected in a negative way. The only thing that was a major difference when the researcher started examining possible causes was that the use of SBG in lower elementary grades was not making the same transition to middle school as everything else did with the upcoming middle schoolers. The idea that SBG could impact students in a positive manner was what jumpstarted the actual study with using SBG at the middle school level to determine if it would impact student achievement and student self-efficacy.

Finally, more studies could examine the differences in how educators deliver the SBG protocols and how their colleagues deliver traditional grading protocols. The issue of varying degrees of educator experience, training, and attitudes toward the implementation could be another area to explore with additional studies associated with the use of SBG. Qualitative studies could gather input from students and teachers through case studies, interviews, surveys, and observation studies of SBG in action and the feedback driven by success stories or barriers to avoid.

Conclusions

This study investigated the impact that using SBG in ELA classrooms had on student achievement and self-efficacy. The study concluded that students who experienced the use of

SBG from their teachers experienced greater achievement and improved self-efficacy than students in the same grade level who did not experience SBG but were graded using traditional methods by their teachers over a four week period.

While the data indicated that students who experienced SBG experienced significantly higher achievement on their posttests from their pretests, there is still room for improvement to occur. The data for both the treatment group and the control group resulted in a significant difference in posttest achievement scores between the two groups. Additionally, the data demonstrated that participants in the treatment group experienced an overall increase in self-efficacy, whereas participants in the control group did not experience as great of an overall improvement in self-efficacy.

There are two fundamental reasons why traditional grading practices should be re-assessed. First, the implementation of common core aligned standards has helped make learning targets more rigorous, consistent, and transparent. The focus has been to create fewer standards but challenge students to think deeper and work towards more meaningful applications.

Previous iterations of school curricula have focused on far-reaching and low-level rote learning (memorizing facts). Thus, traditional grading practices were perhaps a more appropriate way to measure how a student is doing in school back then. But today grading experts (Guskey, 2014; Marzano, 2000; O'Connor, 2009; Reeves, 2008) agree teachers should update their grading practices to better align with the realities of how and what students are learning in schools.

Secondly, Every Student Succeeds (formerly No Child Left Behind) has changed the way school leaders and teachers operate. These educational laws mandate that schools may no longer simply fail students who don't learn and move on (Huisman, 2016). Instead, all students must be

proficient. School leaders must now ensure their system's purpose is to develop talent rather than merely sort it (Guskey, 2011). Thus, higher scrutiny and accountability over the measurement of student achievement has demanded that grades be more reflective of learning. No Child Left Behind initiatives have exposed that traditional grading practices may no longer be an effective way of measuring student progress in the classroom because they do not equate or correlate with performance on standardized tests (Schimmer, 2016).

As with previous research studies similar to this study, the researcher discovered some consistent themes in support for SBG and how it impacts the different stakeholders who are involved in the SBG process. Communication and delivery of the change from traditional grading to SBG benefits when these common factors are in place. The teachers at the treatment school involved in using SBG shared the following in respect to the training they received prior to SBG implementation which focused on aspects for students, parents and teachers making this transition:

Students:

1-Students are partners in their own learning.

2-Students monitor their own progress toward the achievement of learning targets.

3-Learning targets are clearly defined.

4-Students understand the expectations and purpose of each learning experience.

5-All assessments are clearly aligned to the learning targets, which are directly aligned to Tennessee Standards.

6-Students are required to think critically and to solve real-world problems.

7-Students are offered multiple opportunities and ways through which to demonstrate proficiency.

8-Instruction meets the needs of all students.

9-All students can achieve their highest potential.

Parents

1-Parents can monitor their student's progress.

2-Parents can see exactly what their children know and are able to do.

3-Parents know in what areas their children need more support and where their students can be pushed to higher levels.

4-Report card grades are less mysterious and have more meaning.

5-Requirements for student progression versus retention are much clearer.

Teachers

1-Education becomes more learner-focused, so the teacher and student work more closely together.

2-Teachers in the same grade level have the same expectations and standards.

3-Teachers work more closely together due to common goals and understandings.

4-Collaboration encourages consistency between teachers more than ever.

5-In the same way that expectations for students are clearer, expectations for teachers are clearer, as well.

6-Teachers know exactly where students stand in their progress toward learning targets and what supports need to be provided.

7-Assessment results help teachers determine when students need extra help and when they need more challenging work.

8-Professional development is focused on teachers helping students achieve at higher levels.

SBG has the potential to improve learning outcomes greatly by shifting the focus in the classroom from earning points to learning concepts and skills. Teachers and administrators often get frustrated that students and their parents are focused on earning points, but that is exactly what we reward them for. This research showed that SBG can help improve students' confidence in their ability to learn and increase content mastery. It also made me think more critically about different types of mastery checks and the need to balance formative and summative assessments in the classroom.

This study suggests that implementing this alternative approach will positively impact students' affective and cognitive behaviors. Specifically, it was discovered that self-efficacy increased, and student self-achievement beliefs became more sophisticated after students participated in a class that utilized SBG. From the results of this study, it was indicated from the teachers involved with SBG that they observed their students displaying higher interest, attainment, and confidence and realized it was not costing them valuable time or extra effort to learn.

The overall results of this study suggest SBG to be a viable option for the middle school setting. The implications for switching from the traditional score-based grading system are not insurmountable and worthwhile if students continue to demonstrate improved confidence and knowledge. It is my desire that by switching to an SBG system we can help transform student achievement and self-efficacy by guiding learning with specific feedback from teachers associated back to content standards indicative of the grade level expectations.

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Appendices

Appendix A

Consent Letter and Signature Page for Teachers to Participate

Appendix A

Consent Letter and Signature Page for Teachers to Participate

February 12, 2018

Dear Marion County Teacher Participant,

I invite you to participate in a research study entitled *The Impact of Standards-Based Grading vs. Traditional Grading with Middle School Students Achievement and Self-efficacy*. I am currently enrolled in the graduate program at Carson Newman University in Jefferson City, Tennessee. I am in the process of writing my dissertation. The purpose of the research is to determine: if using different grading systems can impact middle school student achievement and their feelings of self-efficacy (how students feel about the way they are motivated to complete work at school).

Your participation with your 6th and 7th grade ELA students in this research project is completely voluntary. There are no risks to your participation, nor is there any coercion to participate. Your students' responses and performance levels will remain confidential and anonymous. Data from this research will be kept under lock and key and reported only as a collective combined total. No one other than the researcher will know your students' individual answers to the questionnaire or their achievement levels on the given assessment.

If you agree to participate in this project, you are only asked to do 2 things: Administer a pre and post-test on your grade level in the subject of English Language Arts (TN Ready Practice Test) and have the students complete a survey questionnaire (Motivational Learning Strategies Questionnaire) pre and post in regard to their feelings of self-efficacy or how students are motivated to complete work. This study will only last for a nine week period. The results will be used strictly for research purposes, so reports will not be shared unless you request the results be shared with you. Upon completion of the project, if you are interested in the results you can contact me.

If you have any questions about this project, feel free to contact Janet Layne at Monteagle Elementary in Monteagle, TN- Phone: 931-924-2136 or email at jlayne@mctns.net. Information on the rights of human subjects in research is available through the CNU's Institutional Review

Board at Carson Newman University 1646 Russell Ave, Jefferson City, TN 37760, or the link is http://www.graduateprogram.org/carson-newman/edd/curriculum-instruction

Thank you for your assistance in this important endeavor.

Sincerely yours,

Janet Layne, Researcher and Principal, Monteagle Elementary

Consent Form to Participate

If you agree to participate in this study, please sign:
Teacher's Signature_____
Date: _____
Please return to your Janet Layne via email or fax asap
jlayne@mctns.net
Fax # 931-924-2104

Respectfully,
Mrs. Janet L. Layne, researcher
Principal
Monteagle Elementary School

Appendix B

Assent Letter for Students to Participate

Appendix B

Assent Letter for Students to Participate

February 12, 2018

Dear Student Participant and Parent,

I invite you to participate in a research study entitled *The Impact of Standards-Based Grading vs. Traditional Grading with Middle School Students Achievement and Self-efficacy*. I am currently enrolled in the graduate program at Carson Newman University in Jefferson City, Tennessee. I am in the process of writing my dissertation. The purpose of the research is to determine: if using different grading systems can impact middle school student achievement and their feelings of self-efficacy (how students feel about the way they are motivated to complete work at school).

Your participation in this research project is completely voluntary. There are no risks to your participation, nor is there any coercion to participate. Your responses and performance levels will remain confidential and anonymous. Data from this research will be kept under lock and key and reported only as a collective combined total. No one other than the researcher will know your individual answers to the questionnaire or your achievement levels on the given assessment.

If you agree to participate in this project, you are only asked to do 2 things: Take a pre and post-test on your grade level in the subject of English Language Arts and complete a survey questionnaire pre and post in regard to your feelings of self-efficacy or how you are motivated to complete work. This study will only last for a nine week period. Your results will be used strictly for research purposes, so reports will not be shared with your teacher. Upon completion of the project, if you are interested in the results you can contact me.

If you have any questions about this project, feel free to contact Janet Layne at Monteagle Elementary in Monteagle, TN- Phone: 931-924-2136 or email at jlayne@mctns.net. Information on the rights of human subjects in research is available through the CNU's Institutional Review Board at Carson Newman University 1646 Russell Ave, Jefferson City, TN 37760, or the link is http://www.graduateprogram.org/carson-newman/edd/curriculum-instruction

Thank you for your assistance in this important endeavor.

Janet Layne, Researcher and Principal, Monteagle Elementary

Assent Form to Participate

If you agree to participate in this study, please sign:
Student's Signature: _____ Date: _____

If you give permission for your child to participate in this study, please sign:
Parent Signature: _____
Date: _____

Please return to your child's ELA teacher in the 6th or 7th grade at your respective schools.

Respectfully,

Mrs. Janet L. Layne, researcher
Principal
Monteagle Elementary

Appendix C

TN Ready Practice Test Cover Sheets for grades 6 and 7

Appendix C

TN Ready Practice Test Cover Sheets for grades 6 and 7

Tennessee Comprehensive
Assessment Program Grade 6

TCAP

Tennessee Comprehensive
Assessment Program Grade 7

TCAP

Appendix D

MLSQ Questionnaire Survey

Appendix D

MLSQ Questionnaire Survey

Self-Efficacy Scale

Self-Efficacy subscale from the Motivated Strategies for Learning Questionnaire (MSLQ) for Middle and High School students

Pintrich and De Groot, 1989

http://www4.ncsu.edu/~rsawyers/webpage/acc100/MSLQ.htm

MSLQ

The MSLQ asks you about your study habits, learning skills, and your motivation for work in your classes. There are not right or wrong answers to this questionnaire. This is not a test. You should respond to the questions as accurately as possible, reflecting your own attitudes and behaviors. Your answers to this questionnaire will be analyzed by a computer.

The following questions ask about your motivation for and attitudes about your classes this semester. Remember there is no right or wrong answers; just answer as accurately as possible. Use the scale below to answer the questions. If you think the statement is very true of you, fill in the circle on 7; if a statement is not at all true of you, fill in the circle on 1. If the statement is more or less true of you, find the number between 1 and 7 that best describes you.

The researcher selected only the questions that pertained mostly to the study. That is why the numbers chosen for data are highlighted as they appear. There are 81 total questions.

1. In class, I prefer course material that really challenges me so I can learn new things.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

2. If I study in appropriate ways, then I will be able to learn the material in my courses.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

3. When I take a test I think about how poorly I am doing compared with other students.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

4. I think I will be able to use what I learn in my classes this semester in other courses.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

5. I believe I will receive an excellent grade in my classes.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

6. I'm certain I can understand the most difficult material presented in the readings for my courses.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

7. Getting a good grade in my classes is the most satisfying thing for me right now.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

8. When I take a test I think about items on other parts of the test I can't answer.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

9. It is my own fault if I don't learn the material in my classes.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

10. It is important for me to learn the course material in my classes.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

11. The most important thing for me right now is improving my overall grade point average, so my main concern in my classes is getting good grades.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

12. I'm confident I can learn the basic concepts taught in my classes.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

13. If I can, I want to get better grades in my classes than most of the other students.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

14. When I take tests I think of the consequences of failing.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

15. I'm confident I can understand the most complex material presented by the instructors in my classes.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

16. In class, I prefer course material that arouses my curiosity, even if it difficult to learn.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

17. I am very interested in the content area of my classes.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

18. If I try hard enough, then I will understand class material.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

19. I have an uneasy, upset feeling when I take an exam.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

20. I'm confident I can do an excellent job on the assignments and tests in my classes.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

21. I expect to do well in my classes.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

22. The most satisfying thing for me in my classes is trying to understand the content as thoroughly as possible.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

23. I think the course material in my classes is useful for me to learn.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

24. When I have the opportunity in class, I choose course assignments that I can learn from, even if they don't guarantee a good grade.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

25. If I don't understand course material, it is because I didn't try hard enough.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

26. I like the subject matter of my classes.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

27. Understanding the subject matter of my classes is very important to me.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

28. I feel my heart beating fast when I take an exam.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

29. I'm certain I can master the skills being taught in my classes.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

30. I want to do well in class because it is important to show my ability to my family, friends employer of others.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

31. Considering the difficulty of my classes, the teacher, and my skills, I think I will do well in my classes.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

The following questions ask about your learning strategies and study skills for this semester. Again, there are not right or wrong answers; just answer as accurately as possible. Answer the questions about how you study in your classes as accurately as possible. Use the same scale to answer the remaining questions. If you think the statement is very true of you, fill in the circle on 7; if a statement is not at all true of you, fill in the circle on 1. If the statement is more or less true of you, find the number between 1 and 7 that best describes you.

32. When I study the readings for my classes, I outline the material to help me organize my thoughts.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

33. During class time, I often miss important points because I'm thinking of other things.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

34. When studying for my classes I often try to explain the material to a classmate or friend.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

35. I usually study in a place where I can concentrate on my class work.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

36. When reading for my classes, I make up question to help focus my reading.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

37. I often feel so lazy or bored when I study for my classes that I quit before I finish what I planned to do.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

38. I often find myself questioning things I hear or read in my classes to decide if I find them convincing.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

39. When I study for my classes, I practice saying the material to myself over and over.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

40. Even if I have trouble learning the material in my classes, I try to do the work on my own, without help from anyone.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

41. When I become confused about something I'm reading in class, I go back and try to figure it out.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

42. When I study for my classes, I go through the readings and my class notes and try to find the most important ideas.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

43. I make good use of my study time for my classes.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

44. If class readings are difficult to understand, I change the way I read the material.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

45. I try to work with other students from my classes to complete the course assignments.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

46. When studying for my classes, I read my notes and course readings over and over again.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

47. When a theory, interpretation or conclusion is presented in class or in the readings, I try to decide if there is good supporting evidence.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

48. I work hard to do well in my classes even if I don't like what we are doing.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

49. I make simple charts, diagrams, or tables to help me organize course material.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

50. When studying for my classes, I often set aside time to discuss course material with a group of students from the class.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

51. I treat course material as a starting point and try to develop my own ideas about it.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

52. I find it hard to stick to a study schedule.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

53. When I study for a class, I pull together information from different sources, such as lectures, readings and discussions.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

54. Before I study new course material thoroughly, I often skim it to see how it is organized.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

55. I ask myself questions to make sure I understand the materials I have been studying in class.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

56. I try to change the way I study in order to fit the course requirements and the instructor's teaching style.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

57. I often find that I have been reading for my classes but don't know what it was all about.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

58. I ask the instructor to clarify concepts I don't understand well.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

59. I memorize key words to remind me of important concepts in class.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

60. When course work is difficult, I either give up or only study the easy parts.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

61. I try to think through a topic to decide what I am supposed to learn from it rather than just reading it over when studying for my classes.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

62. I try to relate ideas from one course to those in other courses whenever possible.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

63. When I study for a course, I go over my class notes and make an outline of important concepts.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

64. When reading for class, I try to relate the material to what I already know.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

65. I have a regular place set aside for studying.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

66. I try to play around with ideas of my own related to what I am learning in my classes.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

67. When I study for a course, I write brief summaries of the main ideas from the readings and my class notes.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

68. When I can't understand the material in a course, I ask another student in class for help.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

69. I try to understand the material in class by making connections between the readings and the concepts from the lectures.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

70. I make sure that I keep up with the weekly readings and assignments for my courses.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

71. Whenever I read or hear an assertion or conclusion in class, I think about possible alternatives.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

72. I make lists of important items for each class and memorize the lists.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

73. I attend class regularly.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

74. Even when course materials are dull and uninteresting, I manage to keep working until I finish.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

75. I try to identify students in class whom I can ask for help if necessary.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

76. When studying for my classes I try to determine which concepts I don't understand well.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

77. I often find that I don't spend very much time on my classes because of other activities.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

78. When I study for class, I set goals for myself in order to direct my activities in each study period.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

79. If I get confused taking notes in class, I make sure I sort it out afterwards.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

80. I rarely find time to review my notes or readings before an exam.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

81. I try to apply ideas from course readings in other class activities such as lecture and discussion.

1. Not at all true of me	2.	3.	4.	5.	6.	7. Very true of me

Appendix E:

Student Demographic Comparison between Schools

Appendix E:

Student Demographic Comparison between Schools

Demographic	**Treatment School**	**Control School**
Poverty Level	65.4%	64.8%
Students with Disabilities	10%	11%
Race White	93.5	92%
Race African-American	2.5%	3%
Race Indian	1%	1%
Race Hispanic	3%	4%