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An Examination of the Correlation between Teacher-Assigned Standards-Based Grades
and Teacher-Assigned Traditional Grades
and Student Achievement

by

Ashley L. Tyree-Hamby

April 2015


A Dissertation submitted to the Education Faculty of Lindenwood University in
partial fulfillment of the requirements for the degree of
Doctor of Education
School of Education

An Examination of the Correlation between Teacher-Assigned Standards-Based Grades
and Teacher-Assigned Traditional Grades
and Student Achievement

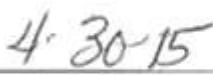
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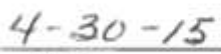
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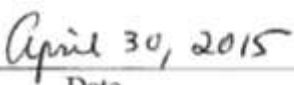
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Date



Dr. Terry Reid, Committee Member



Date

Declaration of Originality

I do hereby declare and attest to the fact that this is an original study based solely upon my own scholarly work at Lindenwood University and that I have not submitted it for any other college or university course or degree.

Full Legal Name: Ashley L. Tyree-Hamby

Signature: Ashley Tyree-Hamby Date: 4/30/2015

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Abstract

The relationship between teacher-assigned standards-based grades and teacher-assigned traditional grades and student achievement on the Missouri Assessment Program was examined for all students of the sample. The 120 participants for this study were third graders during the 2012-2013 school year transitioned to fourth grade during the 2013-2014 school year. The students were enrolled in Elementary School A in rural Missouri. One hundred twenty students' permanent traditional and standards-based grade cards and Missouri Assessment Program (MAP) scores provided the data to determine the relationship between teacher assigned standards-based grade cards or teacher-assigned traditional grade cards and student achievement. The findings of this study provide strong suggestions for school districts considering a standards-based grading and reporting system in response to the recent transition away from traditional grading practices. The results of this study showed a significant relationship between teacher-assigned standards-based grades and student achievement on the MAP in the content areas of English Language Arts and Mathematics. The results of the study suggest standards-based grade reporting offers precise information concerning student learning that can be used as a measure of student achievement.

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Chapter One: Introduction

Historically, elementary grading practice has been intended as a means of indicating the objectives students have mastered from the overall grade-level objectives for a given school year. Edgar, Johnson, Graham, and Dixon (2014) noted, “Grades are generally viewed as an indication of a student’s performance during an academic course” (p. 185). The foundation of the traditional grading methodology has been questioned by many school leaders and educators. Currently, nationwide, there is a transition from the traditional grading system to a standards-based grading system which may more effectively communicate student progress and support the individual educational needs of all students (Edgar et al., 2014). Although, measurement experts recommend a variety of grading practices, traditional academic grading finds educators developing non-uniform criterion which may include both academic and non-academic factors (Edgar et al., 2014).

Background of the Study

Grading and reporting practices are not relatively new in the world of education; however, changes in grading perspectives are becoming more progressive. Thomas Guskey and Howard Pollio (2000) noted that prior to 1850, grading and reporting of student grades were unknown in United States schools. Guskey and Pollio (2000) continued, “During much of the nineteenth century, most schools grouped students of all ages and backgrounds together with one teacher in the one-room school houses” (p. 1). Many students did not study beyond the primary and elementary age level (Guskey & Pollio, 2000). As the number of students increased in one-room school houses in the 1800s, schools began grouping students by grade levels according to their ages (Guskey

& Pollio, 2000). During the 1800s, teachers began to discover new ideas in curriculum and teaching methods. One of the new ideas explored during the 1800s was formal progress evaluations of student work (Guskey & Pollio, 2000). The purpose behind this strategy was for teachers to document the skills each student had achieved and the skills which had not been mastered (Guskey & Pollio, 2000). At that time, it was primarily utilized for student benefit, because students would not move onto the next grade level until demonstrating mastery of the current grade-level objectives (Guskey & Pollio, 2000). This was the beginning of the narrative report card.

Between the years 1870 and 1910 public high schools in America began to grow significantly and began to departmentalize into subject areas (Guskey & Pollio, 2000). Elementary school teachers continued to use written descriptions and narrative report cards to record student progress (Guskey & Pollio, 2000). High school teachers began using percentages to report student accomplishments in separate subject areas (Guskey & Pollio, 2000). All teachers eventually began using percentages and curve grading as years progressed, and the debate over grading and reporting began to strengthen (Guskey & Pollio, 2000). Richert (2008) stated, “Traditionally, grading on the curve has been viewed as motivational by teachers because it fosters competition” (p. 1).

Transitioning into the twentieth century, elementary school teachers began using traditional letter grades. Teachers would record a single letter grade on the reporting form for each subject area studied (Richert, 2008). This type of practice was the beginning of the grading and reporting systems that currently exist today. According to Marzano (2010), “Grades have been used to serve three general purposes simultaneously: ranking, reporting results, and contributing to learning” (p. 15). As stated by Stieger and Krizan

(2013), grades play a significant role in influencing one's well-being. Grades help shape life decisions, such as career readiness and job placement (Stieger & Krizan 2013).

Stieger and Krizan (2013) continued, "Grading systems might have an impact on how people perceive the numbers used for evaluating academic performance in their country" (p. 4).

Conceptual Framework

In this era of standards-based education, students are taught the concepts and skills believed important and necessary according to state standards (Guskey & Pollio, 2000). This study was developed using the concepts espoused by Guskey and Pollio (2000). Students are assessed on their understanding of the concepts and skills through high-stakes assessments (Guskey & Pollio, 2000). Grading and reporting of student learning has created controversy and despite discussions and multitudes of studies, the best grading practice remains indescribable (Guskey & Pollio, 2000).

Grading is an exercise in professional judgment on the part of educators (Guskey & Pollio, 2000). Assessing students involves the confirmation of students' successes or deficits over a specified period of time (Guskey & Pollio, 2000). Guskey and Pollio (2000) noted, "Through this process, various types of descriptive information and measures of students' performances are converted into grades or marks that summarize students' accomplishments" (p. 1). Grading and reporting of students progress is a process by which these judgments are communicated to parents and students (Guskey & Pollio, 2000).

These practices serve a variety of purposes; unfortunately, no one method serves all purposes well. Crouch (2013) espoused, "Teachers feel compelled to grade any and all

student work, believing that a letter or percentage will indicate to students and parents a measure of skill” (p. 1). Students today feel habituated only to pursue cumulative values to get As and Bs to make their families happy (Crouch, 2013). Crouch continued, “Somewhere along the line, all parties have lost sight of what grades are supposed to represent” (p. 1).

Effectively communicating the achievement status of students to parents and other interested individuals is important to the grading practice (O’Connor, 2011). Providing information to students for effective self-evaluation is meaningful towards the growth of student achievement (Tomlinson & McTighe, 2006). Grading and reporting practice is important in the identification process for particular educational paths and programs (Tomlinson & McTighe, 2006). Evaluation and documentation of student achievement can serve as an assessment tool for instructional programs (Tomlinson & McTighe, 2006). The method of using grading practices as a way to provide student incentives is non-beneficial (O’Connor, 2011).

The variety of grading practice methods have resulted from the absence of proper teachers training on effectively evaluating and reporting progress (Guskey, Swan, & Jung, 2011). Guskey et al., (2011) asserted, “Grades have long been identified by those in the measurement community as prime examples of unreliable measurement” (p. 53). Standards-based approaches to grading and reporting address grading perplexities in two ways. First, standards-based grading requires teachers to assign grades that examine the meaning of the standard and decide what evidence best reflects achievement of the standard (Guskey et al., 2011). Secondly, standards-based assessment compels teachers to

distinguish product, process, and progress criteria in assigning grades (Guskey et al., 2011).

Crouch (2013) noted, “Grades and the havoc they impart on the teaching and learning process impact the desire to learn for learning’s sake” (p. 2). The research performed by Ellis (2009) revealed the effects of assigning student grades, when focusing on motivation and learning outcomes. Alfie Kohn was quoted by Ellis (2009), “The research supports three consistent effects of giving students grades or leading them to focus on what grade they’ll get” (p. 1). Kohn (2011) added the belief the interest of student learning is weakened due to the assignment of a series of letters on a piece of paper (Ellis, 2009). Students also come to expect easier tasks from their classroom teachers, due to the rationale of the measurement of student progress (Ellis, 2009). Lastly, Kohn stated, “Students tend to think in a more superficial fashion and tend to forget what they learned more quickly when grading is involved” (as cited in Ellis, 2009, p. 1).

Curriculum standards are now being used as assessment strategies, which has resulted in many educators developing standards-based report cards. Guskey and Jung (2006) noted, “Soon after beginning the process most find themselves embroiled in controversy, particularly when parents see a standards-based report card for the first time” (p. 6). Primarily focusing on standards poses self-contained challenges in grading and recording; however, traditional letter grades have drawbacks as well. When assigning a single letter grade to students for each subject studied, teachers combine evidence from a variety of diverse sources into one mark (Guskey & Jung, 2006). Traditional grading methods are confusing and are difficult to interpret (Guskey & Jung, 2006). Rarely, do they present a true picture of a student’s proficiency (Guskey & Jung, 2006). Guskey and

Jung (2006) continued, “A standards-based report card allows teachers to report on the adequacy of students’ academic achievement, as well as their attitudes, efforts, participation, and work habits” (p. 7). Standards-based report cards break down each subject area or course into detailed elements of learning (Guskey & Jung, 2006).

Assessing each standard within each subject area gives parents a detailed explanation of their child’s achievement (Guskey & Jung, 2006).

Statement of the Problem

Currently, throughout the United States and around the world, standards have become the basis for aligning educational needs. Common standards have begun to emerge, and with this new perspective many school districts are considering revisions in grading policies and practices (Hu, 2009). As a result, many districts such as School District A (a pseudonym for the participating district in this study), are taking on the challenge of developing standards-based report cards. Winni Hu (2009), author with the *New York Times*, stated, “Report cards are critical tools for promoting accountability for states, districts, and schools by publicizing data about student performance and program effectiveness for parents, policy makers, and other key stakeholders” (p. 1).

Teachers trust in their own knowledge to assess student work, assign grades, and compare or rank students’ scores (Clements, 2013). Upon conclusion of grading and rating procedures, teachers communicate the results into a written report card and share with students and family members (Clements, 2013). Grades serve a variety of purposes; historically, grades have been used to motivate, sort, rank, and qualify students for college entry and scholarships (Brookhart, 2011). Rather than ranking students, grades need to inform students and their families of student progress and areas where there is

still work to accomplish (Brookhart, 2011). Grading methods need to distinguish between performance and non-academic indicators, such as effort (Brookhart, 2011).

Purpose of the Study

The objective of standards-based grading is to raise student achievement by clearly communicating students' progress toward learning targets (Marzano & Heflebower, 2011). In Missouri, those targets are identified as Missouri Learning Standards (Missouri Department of Elementary and Secondary Education [MODESE], 2014). The purpose of this study was to determine if there is a more significant line of fit between standards-based teacher-assigned grades and student achievement or between teacher-assigned traditional grades and student achievement. No comparative data existed in School District A regarding the effectiveness of standards-based report cards in kindergarten through fourth grade.

School District A recently implemented standards-based grade cards in kindergarten through fourth grade. The purpose of this research project was to determine if there existed significant differences between standards-based teacher-assigned grades and student achievement and teacher-assigned traditional grades and student achievement. This study resulted in the generation of new information to inform expansion of standards-based report cards at the middle school level for School District A.

Research questions and hypotheses. The following research questions guided the study:

1. What is the relationship between teacher-assigned standards-based grades and

student achievement scores on the Missouri Assessment Program (MAP) grade-level English Language Arts (ELA) assessment in one rural elementary school?

H1₀: There is no relationship between teacher-assigned standards-based grades and student achievement scores on the Missouri Assessment Program (MAP) grade-level English Language Arts (ELA) assessment in one rural elementary school.

2. What is the relationship between teacher-assigned traditional grades and student achievement scores on the Missouri Assessment Program (MAP) grade-level English Language Arts (ELA) assessment in one rural elementary school?

H2₀: There is no relationship between teacher-assigned traditional grades and student achievement scores on the Missouri Assessment Program (MAP) grade-level English Language Arts (ELA) assessment in one rural elementary school.

3. What is the relationship between teacher-assigned standards-based grades and student achievement scores on the Missouri Assessment Program (MAP) grade-level Mathematics (MA) assessment in one rural elementary school?

H3₀: There is no relationship between teacher-assigned standards-based grades and student achievement scores on the Missouri Assessment Program (MAP) grade-level Mathematics (MA) assessment in one rural elementary school.

4. What is the relationship between teacher-assigned traditional grades and student achievement scores on the Missouri Assessment Program (MAP) grade-level Mathematics (MA) assessment in one rural elementary school?

H4₀: There is no relationship between teacher-assigned traditional grades and student achievement scores on the Missouri Assessment Program (MAP) grade-level Mathematics (MA) assessment in one rural elementary school.

Definition of Key Terms

For the purposes of this study, the following terms are defined:

Annual Performance Report (APR). The APR is based on performance standards and reviewed for accreditation purposes at the district level (MODESE, 2014).

Census sampling. Census sampling is an attempt to acquire data from every member of a population (Fraenkel, Wallen, & Hyun, 2015).

Common Core State Standards (CCSS). The CCSS are a set of high quality academic expectations in English language arts (ELA) and mathematics that define the knowledge and skills all students should master by the end of each grade level in order to be on track for success in college and career (Council of Chief State School Officers, 2015).

Correlational quantitative research. Correlational quantitative research involves collecting data in order to determine the degree to which a relationship exists between two or more variables (Fraenkel et al., 2015).

Elementary School A. Elementary School A is an elementary school in southern Missouri with a population of 681 students that introduced standards-based grading during the 2013-2014 school year.

Line of best fit. Using the Pearson correlation coefficient r , line of best fit indicates how far away data points of two variables are from a perfect +1 correlation (Fraenkel et al., 2015).

Mean difference. Statistical analyses are very often concerned with the mean difference (Fraenkel et al., 2015). A typical example is an experiment designed to compare the mean of a control group with the mean of an experimental group (Fraenkel

et al., 2015). Inferential statistics used in the analysis of this type of experiment depend on the sampling distribution of the difference between means (Bluman, 2013).

Middle School A. Middle School A is a middle school in southern Missouri with a population of 565 that is considering the expansion of standards-based grading.

Missouri Learning Standards. The Missouri Learning Standards define the knowledge and skills students need in each grade level and course for success in college, other post-secondary training, and careers (MODESE, 2014).

School District A. School District A is a district in southern Missouri with a population of 2,651 that implemented standards-based grading at the elementary level during the 2013-2014 school year.

Standards-based grading. Standards-based grading involves measuring students' proficiency on well-defined course objectives (Tomlinson & McTighe, 2006). Student success is measured by a student's mastery, with a grading scale based on a four-point scale (1/Beginning, 2/Developing, 3/Proficient, 4/Advanced, and/or Blank) (Tomlinson & McTighe, 2006).

Subgroups. To ensure inclusion and to differentiate among the needs of schools, Missouri issues and reports the academic achievement of those students who fall into subgroups that have historically performed below state standards (MODESE, 2014). Four significant gaps in subgroup performance include; race, low-income students, students with disabilities, and English language learners (MODESE, 2014).

Traditional grading. Traditional grading indicates letter grades A, B, C, D, and F based on a cumulative 100-point grading system (Marzano, 2010).

Limitations and Assumptions

The primary goal of this quantitative study was to investigate the relationships between teacher-assigned traditional grades and teacher-assigned standards-based grades and student achievement. Caution must be exercised when making generalizations based on the findings of this study, as limitations and assumptions apply. The following limitations were identified in this study:

Sample size. In research studies, it is the expectation that the findings of research are generalized and have implications for further research (Fraenkel et al., 2015). In quantitative studies researchers use large and random samples to improve the statistical outcomes (Fraenkel et al., 2015). One limitation observed was the sample size of this study. This study involved a census sample of all elementary students from years 2012-2013 (third grade) and 2013-2014 (fourth grade) in School District A. A census sampling was taken of 120 elementary students from a population of 120 from Elementary School A within School District A. A census sampling was used to acquire data from every member of the population to inform the results of this study more comprehensively more accurately yielding information for all subgroups of the population (Fraenkel et al., 2015).

Sample demographics. Data were analyzed from one rural school, Elementary School A, within School District A. Elementary School A had a total of 659 students enrolled. Bernhardt (2013) asserted, “Demographic data show the philosophy of the school, through indicators of which and how students are disciplined, identified for special education, advanced placement, gifted programs, etc.” (p. 29). Of the 659 students enrolled in School District A, 120 students were part of the sample. Of the sample,

94.10% were Caucasian students, 2.00% were African American, 0.50% were Asian, 2.90% were Hispanic, and 0.50% were Indian (MODESE, 2014). Of the student population of Elementary School A, 74.3% of the population qualified for free/reduced price meals (MODESE, 2014).

For the academic years of 2013-2014 within Elementary School A, 682 students were enrolled (MODESE, 2014). Of the 682 students enrolled, 94.30% were Caucasian students, 2.10% were African American, 0.30% were Asian, 2.50% were Hispanic, and 0.40% were Indian (MODESE, 2014). Of the student population, 76.6% qualified for free/reduced price meals (MODESE, 2014). The sample demographics for this study indicated a lack of diversity within Elementary School A.

A total of 295 students in School District A received special education services (MODESE, 2014). Of the population, 93.75% of the White race sub group, 2.56% of the Black race subgroup, 1.70% from the Hispanic subgroup, 0.57% from the Asian subgroup, and 1.42% from the Indian subgroup receive special education services with an Individualized Education Plan (IEP) from School District A. Data reported as part of this same profile indicated that during the 2012-2013 academic school year 97 special education students in School District A received education in the general education classroom greater than 79% of the school day. One hundred sixty-six special education students from School District A received education in the general classroom between 40%-79% of the school day. Thirty students from School District A received education in the general education classroom less than 40% of the school day. The district profile indicated that during 2012-2013 academic school year, there were a total of two special education students who received homebound services from School District A.

Lack of prior research. There existed no comparative data in School District A regarding the effectiveness of implementing standards-based grade cards in kindergarten through fourth grade. Further, there exists limited literature on the comparison of how students score on standardized assessments in comparison to how they score on traditional grade cards or standards-based grade cards. Data collected during this study will inform grading policy, assisting in the future expansion of standards-based grading at the middle school level in School District A.

Summary

Chapter One highlighted the background for this study, specified the problem, described the significance of the problem, and presented a brief overview of the methodology used. The first chapter concluded by stating the specific limitations contained within the study. A review of the related literature will be presented in Chapter Two. Chapter Two includes a review of the literature on teacher preparatory experiences, effective classroom practice, standards-based grading practices, and traditional grading practices.

Chapter Three will describe an explanation of the research design, highlighting the research questions and hypotheses that served as a guide throughout the study, an overview of the research problem and purpose, sample population selection, instrumentation used for data collection, and the statistical procedures employed. The results of the investigation outlined in Chapter Three will be presented in Chapter Four, which includes a detailed statistical analysis of the data and an interpretation of the findings that link to the research questions. A summary of the research, its limitations, and implication for further research will be discussed in Chapter Five.

Chapter Two: Review of Literature

Throughout the literature review, grading practices and student performance were examined. The chapter begins by focusing on teacher preparation and teacher quality in relation to student assessment. Effective practice and accountability are explored, followed by grading practices. This review concludes with the recognition of traditional and standards-based grading methods.

Research supports the task of assigning grades varies, and there are numerous grading practices (Brookhart, 2011). School systems may engage standards in relation to grading, although teachers use both academic and non-academic factors to determine a grade (Brookhart, 2011). The conceptual framework which provides context and perspective for the study is established in this chapter. The literature review includes an examination of the current literature and research on the topics of standards-based grading, traditional grading, state assessments, and the restructuring movements that have directed the grading paradigm shift.

Researchers have sought to explain reasons for teachers' assessment and grading practices and factors that influence those practices (Brookhart, 2011). In this review of literature, these findings are discussed. Britton (2011) defined grading practice as the process a teacher uses to assign value to student performance on assessments and grade reporting as a dissemination of that information to students and their families.

Conceptual Framework

For most K-12 school systems in the United States, two co-existing assessment systems exist: standardized test performance scores and teacher-assigned grades (Evans, 2013). Standardized assessment results are reported to school administration, the

community, and state and federal policy makers, while teacher-assigned grades are primarily reported to students, parents, and district-level stakeholders (Evans, 2013). The purpose of grading in education is similar to the reasons humans use a compass (Evans, 2013). A compass provides direction, just like grading and reporting provide students and parents with direction (Evans, 2013). According to O'Connor (2009), educators today grade for these four general purposes; instructional uses, communication uses, administrative uses, and guidance uses. O'Connor (2009) continued, "Communication is also the purpose that best fits with what grades are-symbols that summarize achievement over a period of time" (p. 16).

Many school districts nationwide are engaged in the change from the traditional-based grading method to the standards-based grading method (Marzano & Heflebower, 2011). Marzano and Heflebower (2011) noted, "In an effort to cure the ills of current grading and reporting systems, many schools and districts across the United States have attempted to implement a standards-based system" (p. 34). Guskey (2009) supported that of all phases of the educational system, none seems more resistant to change than grading and reporting.

However, in recent years school districts nationwide have investigated the new perspectives which have begun to develop, and implementation is well under way (Marzano & Heflebower, 2011). To realize the true student benefits of a standards-based approach educators must recognize the improvement process and take into consideration all features of the school district, which may be affected by the new implementation of the standards-based reform (Marzano & Heflebower, 2011). The level of effort at district, school, and classroom levels can impact the implementation of changes and can

significantly affect results (Guskey, 2009). Guskey (2009) stated, “The most carefully articulated curriculum, best-aligned assessments, and most thoughtful standards-based grading and reporting system would make little difference if organization policies stand in the way of their implementation” (p. 10).

The most important aspect of grading and reporting practices which support student learning and student success is communication (Guskey & Bailey, 2010). School leaders and classroom teachers must strive to do a better job of communicating student learning with students and parents (Guskey & Bailey, 2010). Involving students and their families is essential to student learning efforts (Guskey & Bailey, 2010). According to O’Connor (2009), “For report cards to provide effective communication, they need an expanded format in which teachers can give information on student achievement of specific learning goals and general learning skills or work habits” (p. 220). Marzano (2010) determined, “A learning goal is a statement of what students will know or be able to do” (p. 17).

School leaders and classroom teachers are aware of impediments to parental involvement and support (Guskey & Bailey, 2010). Hayes (2011) stated, “Parental involvement can be conceptualized as the means by which parents support their children’s education and development to ultimately provide a positive influence on their academic achievement and school adjustment” (p. 2). According to Topor, Keane, Shelton, and Calkins (2010), “Parent involvement has been defined and measured in multiple ways, including activities that parents engage in at home and at school and positive attitudes parents have towards their child’s education, school, and teacher” (p. 184).

The influence of parental involvement in the educational process helps reduce the achievement gap for school-aged children (Hayes, 2011). Topor et al. (2010) noted, “The influence of parental involvement on academic success has not only been noted among researchers, but also among policy makers who have integrated efforts aimed at increasing parent involvement into broader educational policy initiatives” (p. 183). According to Hayes (2011), the frequency of parent and school interactions proves to be viewed as an investment in a child’s future. Guskey and Bailey (2010) asserted, “Parents want a report card that offers more precise information about how their children are doing in school, but they want that information to be understandable and useful” (p. 1).

Guskey and Bailey (2010) described the following obstacles of parental support: both parents work outside the home, single parents with heavy responsibilities, transportation difficulties, child care needs, cultural and language barriers, and parents who are simply too stressed or depressed to care. Conversely, “Strong evidence indicates that parents at all socioeconomic levels and of all educational backgrounds are willing to help their children succeed in school” (Guskey & Bailey, 2010, p. 203). According to Webber (2012), parents want more complex interactions with school leaders and educators. He also explained parents who value grades and other forms of ranking still want to engage and interact with teachers in other ways (Webber, 2012).

Guskey and Bailey (2010) continued, “Conversations create space for the complex dynamics necessary for communication” (p. 34). Webber (2012) went on to describe a good conversation as one which moves, builds and bends back on itself, pauses, gathers steam, takes turns, plunges forward, and gathers itself into new understanding and connections. The full engagement of students and parents is necessary,

as school leaders and educators give voice to student progress and achievement (Webber, 2012). Decades of research conducted by Webber (2012) indicated grades do not lead to higher-order understanding, increased academic risk-taking, or better performance on complex tasks, nor do conversations based on grading produce these results.

Teacher Preparation

Teacher preparation and teacher quality are believed to be key components in students achievement and other outcomes within the school (Cochran-Smith & Power, 2010). Wang, Lin, Spalding, Klecka, and Odell (2011) asserted, “It is generally assumed that quality teaching plays a major, if not the most important, role in shaping students’ academic performances” (p. 2). The terms teacher preparation and teacher quality encompass an array of complex and controversial issues, including preparation programs, teacher recruitment, teacher qualifications, professional development opportunities, teacher effectiveness, and teaching practices (Cochran-Smith & Power, 2010).

Goldhaber and Walch (2014) noted, “Numerous studies show that student academic success depends in no small part on access to high-quality teachers” (p. 1). In teacher preparatory programs instructors are particularly engaged in teaching that occurs in school classrooms, where efforts involve responsibility for students required to work with their teacher and peers for nine months (Lampert, 2010). Lampert (2010) added, “Besides working with students, teachers need to work in relation to the particular subject matter that students are responsible for learning” (p. 3).

For the young students of the nation to have access to a positive and quality education, it is imperative novice teachers actively participate and complete excellent preparatory programs (Linek et al., 2012). Although, teacher quality is assumed to be the

key ingredient to student achievement, Cochran-Smith and Power (2010) defined teacher quality as a term with a complex array of controversial issues including “teacher recruitment, teacher qualifications, preparation programs, and pathways, induction programs for new teachers, professional development, teachers’ working conditions, teacher assessment and effectiveness, practice regarding hiring and compensation, and the attrition and retention of the teacher workforce” (p. 6). Lampert (2010) noted, “Initial teacher preparation must help novices learn how to do instruction, not just hear and talk about it; yet there is often more emphasis on tools for practice than on practice itself” (p. 6). Wang et al. (2011) highlighted teacher preparatory instructors prepare course work and experiences with the goal of educating novice teachers whose knowledge, skills, and habits of mind will interact to generate positive patterns of experience known as quality teaching.

Quality teaching is related to knowledge, beliefs, attitudes, and personalities teachers bring into the education profession (Wang et al., 2011). Quality teaching is connected to the candidates’ abilities demonstrated on academic and professional tests (Wang et al., 2011). Excellence in teaching is also associated with qualifications of educators in the specific fields that they are teaching (Wang et al., 2011). According to Wang et al., (2011), “Another notion about quality teaching from a cognitive resource perspective assumes that teachers’ knowledge, skills, and dispositions are central predictors for quality teaching” (p. 3).

Howell, Cook, and Faulkner (2013) noted, “In an era of high stakes accountability, the expectation that all students will learn at or above proficient levels

requires more skillful teaching by high trained teachers” (p. 5). Hollins (2011)

highlighted:

Conventional pre-service teacher preparation programs have been criticized for being too often characterized by fragmentation, weak pedagogy, and a lack of articulation among courses and between courses and field experience, as well as for the absence of a set of organizing themes, shared standards, and clear goals.

(p. 2)

It has been argued the caliber of the United States educational system is causally linked to the health of the economy in America (Cochran-Smith & Power, 2010). Cochran-Smith and Power (2010) continued, “The argument is that the country’s success in a globalized society depends on preparing its citizens to meet world-class academic standards and master complex skills” (p. 7).

National and international assessments show after high school graduation, many United States students lack college and career readiness (Cochran-Smith & Power, 2010). The United States educational system strives for rigorous new standards and assessments for students and the development of a more talented and effective teaching force through teacher preparation programs (Cochran-Smith & Power, 2010). According to Cochran-Smith and Power (2010), “President Obama and Secretary of Education Arne Duncan consistently advance this argument” (p. 8).

Cochran-Smith and Power (2010) highlighted the advancement of this endeavor through projects like the Common Core State Standards (CCSS) Initiative, which includes the adoption of rigorous state standards across the United States. Hess (2013) defined the CCSS as a listing of what students should know, or “aspirational words on a

page” (p. 62). Hess (2013) explained that delivering on the promise of the CCSS will require states, districts, and schools to make an abundance of complementary changes to curriculum, tests, and teacher training. Rothman (2012) stated, “Nearly every state, with little fanfare, has adopted the Common Core State Standards for student learning in English Language Arts and Mathematics” (p. 57).

Work completed by Michelman (2014) revealed that in the winter of 2014, 43 states had adopted the new math and English language arts standards. According to Michelman (2014), this new initiative represents the largest change in K-12 education nationwide. The CCSS define the knowledge and skills all students are expected to acquire in order to be prepared for college and careers by the time they graduate high school (Michelman, 2014). According to Michelman (2014), “The Common Core will affect state assessments and accountability, revamp K-12 instruction, force changes in teacher preparation and professional development, and more” (p. 62).

As school districts across America begin to transition curriculum to align with the CCSS Initiative, the question asked is, “What will the Common Core Assessments look like?” (Demski, 2013, p. 12). Many school districts are engaged in mapping and aligning content and curriculum to the CCSS (Demski, 2013). This new initiative can be unnerving to teachers and administrators (Demski, 2013). Demski (2013) continued, “Standards and assessment criteria developed by national organizations in the United States address qualifications of beginning as well as experienced teachers and all emphasize student learning” (p. 1).

Districts should direct focus on how to teach content with depth and rigor set forward by CCSS, but this can be difficult when accountability systems are associated

with student performance on CCSS-aligned assessments (Michelman, 2014). As cited in Demski (2013), Geoff Fletcher, deputy executive director of the State Educational Technology Directors Association, and Kathleen Porter-Magee, senior director of the High Quality Standards Program at the Thomas B. Fordham Institute, offered some guidance on how to best prepare for the new CCSS. Squires (2012) argued pre-Common Core standards can be prolonged, with some subject areas having hundreds of standard statements for a grade level, making it impossible to complete within one school year. Squires (2012) continued, “Alignment of the curriculum to state standards and assessment specifications is very important in developing a design for curriculum at the district level” (p. 30).

School districts nationwide need a curriculum which identifies what students should know and be able to do and is aligned to the standards and assessment specifications (Squires, 2012). According to Reeves (2010), “One of the most important transitions in education in the past decade has been the embrace of academic standards as the prevailing method for evaluation of students” (p. 57). The transformation in academic standards has implications to school leaders (Reeves, 2010).

Reeves (2010) suggested, “First, test scores alone are not a sufficient reflection of student learning, but we must base our conclusions on the evidence of student success” (p. 58). Second, the overall purpose of assessment is not solely to assess students, rather to teach students (Reeves, 2010). Reeves (2010) noted, “Assessment is most effective as a preventive rather than a remediating or punitive strategy” (p. 58). Lastly, overall the purpose of assessment in a standards-based system is not only to provide feedback to students and their families, but to improve teaching and leadership (Reeves, 2010).

Squires (2012) asserted aligned curriculums focusing on one particular curricular activity and more than one standard will lessen the problem of having many standards per grade-level course.

With the implementation of the new standards, teachers will have to think differently about how they are going to assess student learning in their own classrooms. Guskey and Bailey (2010) noted, “Teachers want a report card that matches recent changes in their curricula and classroom assessments, but they do not want a form that requires a lot of extra time and effort to complete” (p. 2). All school leaders want a report card that is meaningful and facilitates learning (Guskey & Bailey, 2010). School leaders have the responsibility of deciding how to best meet the CCSS by providing faculty with the resources and guidance to implement the standards (Eilers & D’Amico, 2012).

High-impact learning must include a clear integration of what is to be taught and how essential learning will be assessed (Reeves, 2010). According to Reeves (2010), “A focus on curriculum alone, however, is insufficient” (p. 68). Reeves (2010) suggested a five-step process that allows teachers to focus on the importance of curriculum and the development of the comprehensive assessments. The first step of the process is identifying the power standards of the curriculum, by applying practical application skills for students (Reeves, 2010). In the second step noted by Reeves (2010), “Teachers must collaborate to create new performance assessments, including specific scoring guides that evaluate each level of student performance” (p. 68). Reeves (2010) suggested that students do not need to move onto step three, until step one and step two have reached proficiency. Teachers should work independently to provide feedback and guidance for each task on the performance assessment (Reeves, 2010). Step four of the process is to,

“Exchange papers and apply the scoring rubrics created in the second step to work with a colleague” (Reeves, 2010, p. 69). The final step of the process is to revisit the assessment instructions and the grading rubric for revisions (Reeves, 2010).

Early childhood learning standards require a foundation of support by professionals and families. Foundational support for stakeholders and the students is necessary for a high-performing education system (Kohler, Christensen, & Kilgo, 2014). Kohler et al. (2014) added, “Assessment should be based on the fact that the standards are clearly calling for more writing and more ways of understanding the depth of a students’ knowledge and critical thinking skills” (p. 16).

Demski (2013) specified, “In the information economy of the 21st Century America, teachers have a job that is fundamentally different from that of past generations of teachers” (p. 1). Teachers today must educate and prepare all students to achieve with the highest of learning rigor (Demski, 2013). According to Chesley and Jordan (2012), “Teacher preparation institutions need to transform their programs to reflect the realities of 21st century schools” (p. 41). Today, teachers must consider student preparation for the future, beyond high school (Chesley & Jordan, 2012).

According to Ronfeldt et al. (2013), most teacher education programs do not effectively prepare student teachers in competencies that new teachers need. Moreover, “The debate over how best to improve instructional quality in K-12 schools is fierce, particularly regarding underserved schools that typically have fewer qualified teachers and those schools of education consider their responsibility to teach” (Ronfeldt, et al., 2013, p. 2). Over the past several decades, the school population in regular education classrooms has become even more diverse in terms of students’ cultural, ethnic, religious,

and linguistic backgrounds, as well as students' range of ability levels (Cochran-Smith & Power, 2010). Many pre-service teacher programs focus curriculum specifically on preparing teachers to meet the needs of diverse learners (Cochran-Smith & Power, 2010).

During the course of teacher preparation classes, novice teachers have limited knowledge and training in grading methods and the effectiveness of grading practices (Guskey 2012). Guskey (2012) stated, "Preparation programs should, first and foremost, provide meaningful classroom experience for pre-service teachers" (Shuls & Ritter, 2013, p. 31). Many teacher preparation courses emphasize the design and delivery of instruction, but rarely focus on developing appropriate measures of assessments and contributing factors to consider when assigning grades, which supports findings in Brookhart (2011). Ingersoll, Merrill, and May (2012) noted, "The preparation of prospective teachers is one of the most contentious issues in education policy" (p. 30).

Teachers are not equipped to develop assessments based on valid measurement standards (Guskey & Jung, 2010). Guskey and Jung (2010) continued, "Teachers have received little guidance on how to assign fair grades to exceptional learners" (p. 33). Careful and cautious assessment of student work is important in allowing students to grow intellectually (Guskey & Jung, 2010). Teachers may become overwhelmed due to the amount of time grading, which may impact other areas of teaching (Romano, 2010). Gordon and Fay (2010) added, "Grading is one of the least liked, least understood and least considered aspects of teaching" (p. 93). Swafford (2014) highlighted that teachers nationwide are being held accountable for student achievement, signifying the need to look at all possible paths of improving student success. Swafford (2014) continued, "Effective teachers who create positive learning environments develop not only a

classroom setting that enhances student performance, making a learning environment a key focus in educating students (p. 32).

In an effort to determine why teachers have difficulty assigning grades, Tombari and Borich (1999) narrowed the reasons to three. The first reason is grading practices are so subjective from one teacher to the next in both academic and non-academic areas (Tombari & Borich, 1999). Second, teachers have a difficult time reporting only one single grade, rather than a multitude of individual grades, which may be an inaccurate or invalid measure of student performance (Tombari & Borich, 1999). Lastly, teachers are inadequately prepared in the areas of grading and assessment (Tombari & Borich, 1999).

According to Caneva (2014), a solution which ensures students get on-track is to offer structured, school-wide standards for revision of work and late assignments. Caneva (2014) added, “Many networks and schools are trying out no-zero policies, especially schools that are already on probation and have experienced little improvement” (p. 54). O’Connor (2009) noted teachers need to make revisions to classroom policies, in relation to late work, missing work, or neglected work, other than assigning zeros. Marzano (2010) stated, “One absolute rule a student should not be assigned a zero for not taking a test, not turning in an assignment, or turning it in late” (p. 115).

To endure the fundamental kind of grading reform seen in school districts nationwide, educators need to participate in meaningful professional development opportunities. Marzano (2010) highlighted:

While the standards-based system seems like a good practice, without giving teachers guidance and support on how to collect and interpret the assessment data

with which scores like advanced, proficient, basic, or below basic are assigned, standards-based reporting can be highly inaccurate. (p. 18)

Educators not only need to study grading and reporting research, but also explore new learning opportunities around effective classroom management, assessment, and instruction (Erickson, 2011). Guskey and Suk Yoon (2009) asserted, “Educators at all levels need just-in-time, job-embedded assistance as they struggle to adapt new curricula and new instructional practices to their unique classroom contexts” (p. 498). Guskey and Suk Yoon (2009) continued by saying those responsible for the planning and preparing of professional development opportunities must learn how to critically assess and evaluate the effectiveness of staff development opportunities.

According to Reeves (2010), high-impact professional development has three necessary features. The first characteristic is a focus on student learning (Reeves, 2010). Reeves (2010) asserted, “High impact is related to student results, and student results must be analyzed one student and one classroom at a time” (p. 22). The second characteristic of high-impact professional development is rigorous amount of adult decision making (Reeves, 2010). This characteristic focuses on the high-impact specialized learning related to not only measurement of student learning, but also a clear examination of the decisions of teachers and school leaders (Reeves, 2010). The final characteristic is a focus on people and practices, rather than programs (Reeves, 2010). Instructional programs are ineffective in comparison to the depth in which the programs are implemented (Reeves, 2010). Reeves (2010) highlighted, “Professional learning is intensive and sustained, it is directly relevant to the needs of teachers and students, and it provides opportunities for application, practice, reflection, and reinforcement” (p. 23).

In the early 1990s, the National Staff Development Council (NSDC) set out to develop national standards for professional learning (Mooney & Mausbach, 2008). These standards document the connection between staff and the development of student learning (Mooney & Mausbach, 2008). There are 12 NSDC process standards and content standards which describe how professional learning takes place and the knowledge and skills needed to teach so students learn (Mooney & Mausbach, 2008). Mooney and Mausbach (2008) concluded, “These national standards set a high bar for adult learning that is aimed at improving student achievement” (p. 95).

Effective Practice

Educators envision a teaching profession which embraces collective accountability for student success and learning and collaborative autonomy that allows teachers to do what is best for students (“The Future of Teaching,” 2014). According to the article, “The Future of Teaching” (2014), “Effective teaching is a student-centered practice that is at the heart of our vision for the teaching profession” (p. 16). Implicit practice in the classroom will ultimately lead to improved student outcomes (“The Future of Teaching,” 2014). Effective teachers have the opportunity to have a positive effect on student learning (“The Future of Teaching,” 2014). In “The Future of Teaching,” the *Education Digest* writers (2014) stated, “Teacher effectiveness must be determined through evidence-based processes that are fair, accurate, and transparent” (p. 16).

Student learning is the center of everything a teacher should do (“The Future of Teaching,” 2014). To strengthen the focus on student learning, an educator must transform schooling from a time-oriented system based on grade level and credit accumulation to a performance-based system aligned with national learning standards

(“The Future of Teaching,” 2014). Grading is a matter of fairness (“The Future of Teaching,” 2014). Guskey (2009) added, “Fairness is defined generally as a process or condition in which grades are not unduly influenced by factors unrelated to the standards that are assessed” (p. 113). Fairness in the classroom is also determined by the direct character on whether students have the opportunity to learn (Guskey, 2009). An important necessity to grading with fairness is whether the students know and understand the standards being processed and graded (Guskey, 2009). Campbell (2012) noted, “Students’ grades should accurately reflect what students know and are able to do, inconsistencies across schools, classrooms and departments can lead to inequities for students” (p. 30).

Much of the current educational system focuses on helping students improve their weaknesses, although, teachers should spend time building on students’ strengths (Fink, 2013). Fink (2013) asserted real growth occurs when people work on the edge of their competence; therefore, growth occurs when students are challenged. Students who are not challenged lose out on a sense of confidence that comes along with mastering a challenge (Fink, 2013). Miller (2013) stated, “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” (p. 112).

According to Grinberg (2014), schools in North America are working to replace traditional grading practices involving grids and letter grades with descriptive feedback about the students’ mastery of core concepts. O’Connor (2009) stated, “For grades to have real meaning, they must be relatively pure measures of each student’s achievement

of the learning goals for each course” (p. 90). With standards-based grading practice becoming the norm at the elementary level, it is also gaining momentum at the secondary level (Grinberg, 2014). Hanover Research (2011) asserted, “There has been much debate over whether grades should be designed to communicate a student’s performance in a variety of areas, including behavior and participation, or whether they should just represent a student’s proficiency in a given subject” (p. 2). Reeves (2011) added the continuance of current grading practices will promise the perpetuation of current results. Reeves (2011) continued, “Perhaps it is time to stop focusing so much on grading as a punishment, which has not worked for a century, and refocus our energies on creating incentives for work that students do correctly and on time” (p. 78).

Enciso and Nehring (2011) noted, “Grades are coveted by parents, teachers, and students during the course of a school year, and they are the sole determinant of ones efforts, whether those of teachers, student, or parent’s upbringing” (p. 1). An instructor’s ability to honestly and accurately grade a student’s work is mired in part by biases in the grading and recording policies (Jae & Cowling, 2009). Jae and Cowling (2009) continued, “Unfortunately, in the education realm, bias can lead instructors to grade student effort inappropriately, resulting in less-than-fair or inaccurate measurement of student progress” (p. 51). Wormeli (2006) informed, “A grade is supposed to provide an accurate, undiluted indicator of a student’s mastery of learning standards” (p. 19). Wormeli (2006) stated grades are not intended to be part of a reward incentive, motivation, or behavioral agreement.

With the recent transition to standards-based learning and instruction, differentiated learning can be a compatible approach in classrooms today (Landrum &

McDuffie, 2010). Differentiation in the classroom is not an instructional strategy, but rather a philosophy (Landrum & McDuffie, 2010). Differentiation is a pedagogical approach to teaching and learning for students at varied levels and interests inside the same classroom setting (Landrum & McDuffie, 2010). Whitworth, Maeng, and Bell (2013) highlighted, “The philosophy of differentiation is a way of thinking, but in order for it to facilitate student growth, it must be implemented effectively in the classroom” (p. 3). Standards-based grading and reporting is a gateway to increased student learning, serving as an assurance of differentiated instruction and assessment. Tomlinson (2000) explained differentiation is based on a set of beliefs in the significant differences in students, which has a key impact on what students need to know and learn, the pace at which they need to learn it, and the support they need from teachers and others to learn it well.

Differentiation allows educators to teach the same standards to a varied range of learners by using an assortment of teaching and learning methods (Aldridge, 2010). Differentiated instruction is a teaching method that does not change what objectives are being taught, but rather changes how material is being presented (Aldridge, 2010). Aldridge (2010) continued, “Differentiation suggests that you can challenge all learners by providing materials and tasks on the standard at variety levels of difficulty, with varying degrees of scaffolding, through multiple instructional groups, and with time variations” (p. 9).

It is essential teachers differentiate through the three elements of content, process, and product, and the three categories of student readiness, interest, and learning profile (Tomlinson, 2011). Pijanowski (2011) stated, “In a successfully differentiated classroom,

teachers often allow students to redo work and assessments to demonstrate mastery of content” (p. 3). Pijanowski (2011) continued to support ideals associated with mastery learning which promotes offering students opportunities to relearn specific content during the first attempt. Using differentiated elements and categories will promote flexible grouping, which is channeled by the standards and the students’ proficiency levels in relation to the standards (Pijanowski, 2011).

Students learn at different levels and are able to display knowledge of a standard in different ways and at different speeds (O’Connor, 2009). O’Connor (2009) continued, “This is part of our acknowledgement of individual differences, which encompass learning styles and multiple intelligences, as well as a more general understanding that students are different in many ways” (p. 142). Assessing and reporting standards for exceptional learners can be difficult (Guskey & Jung, 2010). Meaningful report cards that report student achievement are appropriate to all students and their families (Guskey, 2009).

McCray and McHatton (2011) noted, “Exceptional learners are spending increasingly more instructional time in the general education setting and will require high quality teachers who are willing and ready to meet their needs” (p. 2). Suk-Hyang, Wehmeyer, Soukup, and Palmer (2010) noted, “Enabling students to gain access to and make progress in the general education curriculum has become a core requirement of federal law governing educational services for students with disabilities” (p. 1). The Individuals with Disabilities Education Act (IDEA) of 1997 informs the requirement of school districts to institute practices and policies to ensure involvement with and participation in general education curriculum, as well as special education services for

students with disabilities (Suk-Hyang et al., 2010). Teachers must provide support or accommodations to standards and then no change to the grading process is needed (Guskey & Jung, 2010). Guskey and Jung (2010) stated, “Some exceptional learners, however, may not achieve certain grade-level standards without special services or support” (p. 33). McCray and McHatton (2011) asserted, “The level of responsibility that general educators have for the outcomes of exceptional learners is increasing and warrants their equally vested interest in effective inclusionary practices” (p. 4).

Accommodations and modifications of standards require support of instructional teams (Guskey & Jung, 2010). Guskey (2009) added, “Lacking explicit recommendations on grading, most teachers make individual, informal grading adaptations for students receiving special education” (p. 29). An accommodation to content of the standard remains the same, although the method of instruction and assessing mastery of the standard may be adjusted (Guskey & Jung, 2010). The format and display of answering questions would be differentiated, although the content being assessed would remain the same (Guskey & Jung, 2010).

Elliott et al. (2010) stated, “The implementation of testing accommodations for students with disabilities is currently a universally endorsed policy in all states” (p. 4). Accommodations are extensively documented in areas of the testing setting, schedule of the test, test presentation format, and the formatting response (Elliott et al., 2010). Accommodations are in place to increase effectiveness of student scores, so those scores can be meaningful (Elliott et al., 2010).

Suk-Hyang et al. (2010) asserted modification of curriculum is critical if students with disabilities are to achieve access to and make progress in general education courses.

Modifications of standards would result in the alteration of the standard itself (Guskey & Jung, 2010). For students who receive adapted support, the instructional team would provide additional assistance in the areas of need (Guskey & Jung, 2010). Grades should be recorded for identified exceptional learners which are based on modified learning goals and standards (O'Connor, 2009). Standards should not be used to compare exceptional learners to other learners (O'Connor, 2009).

With the consideration of each grade-level standard individually, instructional teams will examine the standards to decide whether accommodations, modifications, or no adaptations are needed (Guskey, 2009). Appropriate standards are what the instructional team designs for particular students, with the idea in mind that the student could reasonably achieve the standard by the conclusion of the school year (Guskey & Jung, 2010). With a standards-based grading and reporting approach the meaning of a grade changes from the general overall assessment of learning to a much more detailed explanation of the students' performance (Guskey, 2009). According to O'Connor (2009), "It is preferable not to grade specially challenged students using letter or numerical grades" (p. 208). The instructional team will record the modified and accommodated standards and goals on the student's individualized education plan, 504 plan, or English language learners plan (Guskey & Jung, 2010).

Providing reliable information which measures student progress is an accurate way for teachers to communicate with students and parents (Symeou, Roussounidou, & Michaelides, 2012). Symeou et al. (2012) added, "When effective, communication between teachers and families provides the two parties with a deeper understanding of mutual expectations and children's needs, thus enabling, both to effectively assist

children and to establish the basis of cooperation” (p. 2). According to Whitmire (2012), “Children whose families are involved in their education are much more likely to succeed in school and in life than children whose families are less engaged” (p. 2). Whitmire (2012) went on to state students who come from more-involved families are more likely to have stronger intrapersonal skills, earn higher grades and test scores, enroll in higher-level programs and courses, graduate from high school and go on to attend college.

Effectively communicating a student’s specific areas of proficiency as well as areas of challenge are important factors with grading (Whitmire, 2012). Whitmire (2012) stated, “Social trust between families, schools, and other related parties is a critical precondition for effective engagement strategies” (p. 2). Stiggins (2005) supported the enhanced learning which takes place when students’ weaknesses are communicated and students have an opportunity to improve on the standard. Lalor (2012) noted, “Good feedback lets students know how they’re progressing, how close they are to their goal, and what to do if they take a wrong turn” (p. 75). Whitmire (2012) added the positive influence of parental engagement will improve student learning, although the support of educators and policymakers must make family involvement an essential function of public schools.

It is important to differentiate feedback and guidance (O’Connor, 2009). O’Connor (2009) noted, “Feedback provides descriptive information about what the student did while guidance provides information about what the student should do to improve” (p. 125). Students need both feedback and guidance, although the order they receive it is important (O’Connor, 2009). O’Connor (2009) suggested providing students with descriptive feedback first, followed by guidance.

When students receive clear, high-quality feedback disconnected to learning targets, students get frustrated, lose sight of goals, and take many detours before they arrive at the desired learning goal (Whitmire, 2012). Written feedback can be used to help students understand where they are going, where they are currently, and how to close the gap (Carlson & Kimpton, 2010). Spending time to reflect the students' strengths, weaknesses, and goals is important to the expanded-format reporting (O'Connor, 2009). As cited in Lucas (2012), San Diego State University professors Nancy Frey and Douglas Fisher asserted: "Without processes to provide students with solid feedback that yields deeper understanding, checking for understanding devolves into a game of 'guess what's in the teacher's brain'" (p. 139). Sarwar, Zerpa, Hachey, Simon, and Barneveld (2012) added, "Teaching practices that offer meaningful tasks, collaboration, and feedback focusing on individual improvement increase intrinsic motivation in students" (p. 6).

Guskey (2009) stated standards-based grading has clear associations for the nature of feedback that students receive. Guskey (2009) highlighted three ways that feedback is delivered. First, feedback is successful when the teacher has a specific explanation that accompanies each possible grade or level of proficiency reported (Guskey, 2009). Providing an overall written and oral comment, alongside the standards-based grade, is a technique that is recommended (Guskey, 2009). Recording general feedback such as "good job" or "keep up the good work" is frequently used by teachers, but unhelpful because it is not specific to the standard and does not provide feedback to improve student performance (Guskey, 2009, p.74).

The common belief prior to the 20th century was that homework helped create a disciplined mind (Marzano, 2010). By the 1940s, the reaction towards homework was the

intrusion on home activities and responsibilities (Marzano, 2010). The 1950s originated a difference in thoughts (Marzano, 2010). Marzano (2010) noted, “Americans believed that U.S. education lacked rigor and viewed homework as a partial solution to the problem” (p. 65). During the 1970s, the homework trend reversed once more (Marzano, 2010). Learning theorists believed that homework caused harm to the mental health of America’s youth (Marzano, 2010). Since the 1970s many arguments have been made around the topic of homework (Marzano, 2010).

Homework can be a source of student frustration. Homework should serve the function of targeting areas of weakness and motivating students to the next level within their capability (Cushman, 2010). Unfortunately, teachers may assign homework without clearly defining a purpose (Cushman, 2010). O’Connor (2009) stated, “Many teachers inappropriately include homework as a specific part of grades” (p. 127).

Homework is often given as a formative assignment, and therefore should not be included in grades (O’Connor, 2009). Excluding formative assignment scores from grades does not mean that they are unimportant (O’Connor, 2009). O’Connor (2009) noted, “Clearly a large step in the right direction would be using formative and summative assessment appropriately” (p. 127). Wormeli (2006) noted, “Homework is never to learn the material the first time around” (p. 116). Homework should be assigned to students after the standard has been mastered (Wormeli, 2006). When students are unaware of the purpose behind homework, motivation decreases (Cushman, 2010). Cushman (2010) asserted, “Above all, students believed homework should match skills they needed to work on individually” (p. 75).

Evaluating student homework for diagnostic purposes is necessary, although grading homework defeats the learning purpose (Fisher, Frey, & Pumpian, 2011). The learning purpose is defeated because learners fear earning a low score on a task they are attempting for the first time (Fisher et al., 2011). Even worse, homework fosters dishonesty or cynical behaviors of both the teacher and the students (Fisher et al., 2011). Some teachers penalize students' grades for not doing practice and homework, while other teachers do not even include practice and homework in grading (Fisher et al., 2011). Fisher et al. (2011) continued, "The student who does no homework yet aces the test could fail in one school and earn a B in the other" (p. 49). Oftentimes, differences between a student who earns As and Bs and a student who earns Ds and Fs are "work ethic, parental involvement, intelligence, homework, engagement, nutrition, attitude, test-taking ability, prior knowledge, organization, commitment, and drug use" (Reeves, 2011, p. 76).

Lalor (2012) highlighted seven practices for high-quality feedback to keep students on the right track:

1. Feedback should connect to clear learning targets and standards that teachers have previously shared with students.
2. After assessing student work and providing feedback, begin by sharing the strengths of the students work first.
3. Openly discuss any questions or concerns that the student has about the work.
4. The teacher should provide direction on how to address the questions and concerns that the student may have.

5. The teacher should treat each student as an individual while providing verbal or written feedback.
6. The teacher should deliver the feedback in a student-friendly language.
7. The teacher should deliver feedback when learners can still benefit from it. (p. 75)

Wormeli (2006) noted, “If grades are distorted by weaving in a student’s personal behavior, character, and work habits, it cannot be used to successfully provide feedback, document progress, or inform our instructional decisions regarding that student” (p. 19).

Reeves (2011) added, “If we agree that grading is a form of feedback, then we should also be able to agree on principles of effective feedback, such as specificity and timeliness, so that students can apply the feedback from their grades to improve their academic performance” (p. 77).

Miller (2013) stated, “Students need timely feedback on work in progress that salutes original ideas, solid research, and effective use of skills as well as offering suggestions for improvement” (p. 115). Miller (2013) continued by stating feedback provided to students can occur in one or more of the following methods: face-to-face conferences, comments on student work, via email, or using grading tools, such as Insert Comment. Tomlinson (2011) stated, “Consistent, specific feedback on a student’s competency in essential goals is a more potent teaching tool than a letter or number grade will ever be” (p. 2).

Historically, assessment practices have been designed to support accountability to differentiate successful learners from unsuccessful learners, identifying the differences between each (O’Connor, 2009). According to O’Connor (2009), “The shift in thinking

about assessment that has occurred since the 1980s and shows that a different understanding has developed about the purpose of assessment” (p. 3). The No Child Left Behind Act (NCLB) of 2001 focused attention on assessment accountability (Birky, 2012). With attention being placed highly on the act, teachers began focusing solely on teaching to the test instead of measuring student achievement (Birky, 2012). O’Connor (2009) added students should be aware of what standards will be assessed.

This does not mean teachers should teach to the test, but rather teachers must test the teaching (O’Connor, 2009). Assessment and evaluation are often confused (Cangro, 2014). Cangro (2014) asserted, “Assessment is an objective measure of what a student knows or can do, while evaluation is a subjective value of worth of student performance” (p. 3). Cangro (2014) differentiated assessment and evaluation as note taking. Assessment is taking notes on what is observed and evaluation is the understanding of the notes (Cangro, 2014).

Assessment for learning has been divided into two components (O’Connor, 2009). O’Connor (2009) described, “Assessment for learning is basically done by others who provide students with descriptive feedback to move their learning forward” (p. 3). The second component of assessment for learning is assessment as learning (O’Connor, 2009). O’Connor (2009) defined, “Assessment as learning is basically done by the students themselves through reflection, self-assessment, and goal setting” (p. 3).

Distinguishing between the two different constructs, formative assessment and summative assessment, is a priority when talking about assessments (Gurvitch & Lund, 2011). Gurvitch and Lund (2011) defined, “Summative assessment is assessment of learning; it is the type of assessment that signifies what students have accomplished and

is used to calculate a final grade” (p. 1). Formative assessment is defined as an assessment for learning and is used to provide educators with feedback about areas in which students need improvement in order to reach a particular goal or standard (Gurvitch & Lund, 2011).

According to Clark (2010), formative assessment informs teaching practice, the basics of instructional decisions are made based on formative assessment data, and students receive support on how to improve lacking areas. Formative assessment provides feedback, but not all feedback is formative (Clark, 2010). Clark (2010) noted, “Feedback becomes formative when students are provided with scaffold instruction or thoughtful questioning that served as a prompt for further inquiry, which then closes the gap between their current level of understanding and the desired learning goal” (p. 5). Marzano (2010) highlighted scores from both formative and summative assessments can be used to generate a summative score or used to track student progress.

Teachers design both formative and summative assessments (Ende, 2014). An instructor’s hope is that the assessments created will provide information that will allow the teachers to help all students (Ende, 2014). According to Ende (2014), “Lately, much of the discussion on assessment creation and methodology has been about designing more valid and reliable assessments” (p. 1). Ende (2014) continued to note that less often do educators address the fact that no matter how valid and reliable a measure is, if students are stressed or anxious about taking the test, the data received may be problematic. To accurately assess students, teachers should work to reduce students test anxiety (Ende, 2014).

O'Connor (2009) highlighted four brain-based and brain compatible assessment and grading practice results. O'Connor (2009) first noted, "Trust and belonging occurs when students are comfortable undertaking assessment activities" (p. 4). Students perform better when they feel and believe the marks will not count towards their overall grades (O'Connor, 2009). Teachers who provide meaningful content and an enriched assessment environment promoted learning (O'Connor, 2009). O'Connor (2009) added, "Intelligent choices in assessment means that teachers do not require each student to demonstrate achievement in the same way as other students; students have some choice in how they are assessed" (p. 5). Finally, O'Connor (2009) described that students need adequate time to become familiar with instruction and assessment methods that are new to them.

With grades connected to learning goals and standards, teachers must mark each assessment on clear, pre-established criteria (O'Connor, 2009). Marzano (2010) stated, "The concept of a rubric has been around for many years" (p. 42). O'Connor (2009) noted, "The use of detailed rubrics or scoring guides is essential, and it is ideal to have students involved in the development of rubrics or scoring guides" (p. 82). Marzano (2010) stated, "Once learning goals have been established, the next step is to state them in rubric format" (p. 19). Birky (2012) supported that in order to fairly assess learning, a teacher must observe learning behaviors over time. Using a rubric is an ideal way to record specific skills that students are working towards (Birky, 2012). Marzano (2010) asserted, "With a learning goal and its associated simpler and more complex content established, a teacher can design a rigorous rubric or scale" (p. 44). The flexibility of rubrics makes it simple for educators to accommodate and adapt to a variety of learners

(Birky, 2012). Birky (2012) noted, “Rubrics are versatile and can help in assessment of student performance, teacher effectiveness, and quality of programs” (p. 2).

Including rubric scores into grades can be done in a variety of ways (O’Connor, 2009). O’Connor (2009) suggested, “Teachers should not simply add numbers together over a semester or a year, what they call the cumulative option, but that teachers should record scores in a variety of ways and then report a grade for each learning goal” (p. 168). Regardless of how teachers determine grades, grades should be based on learning goals (O’Connor, 2009). O’Connor (2009) highlighted, “Rubric scores don’t convert directly to grades” (p. 168). Teachers must decide how to adjust traditional rubric scores to grades (O’Connor, 2009). O’Connor (2009) concluded, “There is no single right way to do it; however, whatever is done needs to reflect evidence of student’s level of mastery of the targets of instruction” (p. 170).

Peer assessment is an assessment form which allows students to be assessed by other students (Thomas, Martin, & Pleasants, 2011). The assessments are both formative reviews, which provide students with effective feedback, and a summative grade (Thomas et al., 2011). Thomas et al. (2011) continued, “Peer assessment includes processes which require students to provide either feedback or grades to their peers on a product, process, or performance, based on the criteria of excellence for that product or event which students may have been involved in determining” (p. 5). DiBattista (2009) asserted:

Regardless of whether delayed feedback or immediate feedback is more effective in promoting learning, there is now a wealth of research in both laboratory and classroom settings that indicates that test-takers learn substantially more when

using IFAT that they do when using a traditional response form that provides no feedback at all. (p. 315)

Lalor (2012) concluded, “By engaging students in a good feedback process, we teach them to be critical thinkers and independent learners” (p. 76).

Nakkula (2013) defined the components designed to boost student engagement and achievement as motivation. Guskey (2009) stated, “Most classroom teachers value student motivation highly” (p. 115). Motivation directly reflects a student’s attitudes and beliefs towards tasks and goals (Nakkula, 2013). Nair et al. (2014) added, “Attitude is vital in learning and that it is attitude that fuels motivation” (p. 4). Nakkula (2013) asserted, “Becoming a successful student, particularly for those who have fallen behind, requires motivation, engagement with school, and authentic ownership of one’s own education” (p. 60).

Most students are motivated to perform well in the classroom (Guskey, 2009). Students strive to pass courses, earn high grades, avoid punishment, and score higher than their peers (Guskey, 2009). Guskey (2009) added, “A mastery or learning goal oriented student is motivated by a desire to improve knowledge to have deeper understanding, getting the reward or avoiding punishment is secondary” (p. 115). Students with that particular mindset will see the true value in what is being learned, strive to be challenged by their teachers, display independent learning, be eagerly engaged, show positive attitudes in relation to learning, become success oriented, and comprehend the connection between effort and performance (Guskey, 2009). O’Connor (2009) stated, “Feedback in the form of words can be very motivational” (p. 125). Wentzel (1993) asserted, “Students may be the primary focus of student-centered learning, but they are not unaccompanied.

Students are supported by and interconnected with all the relational and academic supports their school provides” (p. 63).

Wentzel (1993) examined the relationship between measures of student achievement, such as grades and standardized assessment scores, and students’ social and academic behavior. Results from Wentzel’s (1993) study revealed teacher ratings of students’ prosocial, antisocial, and academic behavior were significant predictors of student grade point average (GPA). Wentzel (1993) revealed, “Evidence from this study supporting the relationships between academic achievement and the enablers of motivation, engagement, and study skills resulted from the development of Academic Competence Evaluation Scales (ACES), a family of rating scales designed to assess student academic competences” (p. 303). Results from Wentzel’s (1993) correlational study indicated, “Academic enablers measured by the ACES; motivation, study skills, interpersonal skills, and engagement demonstrated moderate to strong relationships with grades and standardized assessments of achievement” (p. 303).

Several researchers have explored the significance of the relationships between specific academic drawbacks and academic achievement. Wentzel (1993) examined the relationship between measures of academic achievement (e.g., grades and standardized achievement test scores) and students’ social and academic behavior. Results from the study indicated teacher ratings of students’ prosocial, antisocial, and academic behavior were substantial, independent predictors of student grade point average (GPA) (Wentzel, 1993). Wentzel (1993) added, “Prosocial and antisocial behavior also contributed indirectly to GPA through academic behavior” (p. 303). Wentzel (1993) continued, “Only prosocial behavior, however, was a significant, independent predictor of standardized

achievement test scores” (p. 304). One of the largest areas of frustration in schools today is the sense educators are at the mercy of factors beyond individual control (Wentzel, 1993). Factors included in this category are student socioeconomic levels, school funding, salaries, teaching assignments, class sizes, parents, and a host of other important factors (Wentzel, 1993).

The current era of high-stakes accountability has promoted standardized curriculums and standardized assessments; yet, the debate over standardized grading practices still remains an issue (O’Connor, 2009). O’Connor (2009) added traditional grading practices continue even with the focus placed on standards-based teaching and learning styles and increased parent communication. O’Connor (2009) believed traditional grading practices result in miscommunication and misinterpretation of students’ levels of mastery and achievement.

One of the primary responsibilities of classroom teachers is to report grades based on student learning. Barnes and Buring (2012) promoted traditional grading practice in which students learn a variety of content and teachers are required to assess students’ knowledge of the content and summarize what is mastered into a letter or numerical grading format. McMillan, Myran and Workman (2002) believed these types of grading practices are often arbitrary and vary from teacher to teacher. Reeves (2011) added, “When school systems improve grading policies, they enhance their work on curriculum, instruction, assessment, and leadership; when school systems maintain toxic grading policies, they undercut even their best work” (p. 79).

Grading Practice

When school districts consider adopting new grading practices and policies, districts should carefully review the current grading philosophy and pedagogy. Carifio (2009) added, “Claims grades provide fair and accurate assessments of student achievement can only be answered in the context of why grades exist in the first place, what functions they serve, and what factors should determine a student’s grade” (p. 24). According to O’Connor (2009), educators today grade for four general purposes: instructional uses, communication uses, administrative uses, and guidance uses.

O’Connor (2009) noted, “The purpose of instructional uses is to clarify learning goals, indicate students’ strengths and weaknesses, inform about student’s personal-social development, and contribute to student motivation” (p. 15). Grading for communicative uses is to effectively communicate with students and their families about learning and how students are doing reaching intended learning goals (O’Connor, 2009). Grading is also used for administrative purposes. Administrative uses include promotion, graduation rank, athletic eligibility status, and reporting to post-secondary education institutions (O’Connor, 2009). O’Connor (2009) highlighted, “Guidance uses are in place to help students make their educational and vocational plans realistically” (p. 15).

Tomlinson and Imbeau (2010) stated grading contributes little to student learning. Grading is a small part of a much larger, more important sequence of instruction, assessment, and modification, which indeed does lead to student learning (Tomlinson & Imbeau, 2010). Tomlinson (2011) stated, “Grading itself contributes little to learning” (p. 1). Tomlinson (2011) added, “Grading is a small part of a much bigger, more important cycle of instruction, assessment, and adjustment, which does lead to learning” (p. 1).

Bieber (2011) added, “Assessing student achievement is an essential aspect of what good schools do” (p. 1). Before schools can develop and begin implementing policies for grading which are fair and accurate to exceptional learners, educators and school officials must ensure a high-quality grading and reporting system is in place for all students (Bieber, 2011).

Guskey and Jung (2010) added, “Effective grading and reporting systems base grades on clearly articulate standards for student learning” (p. 31). Standards-based practice changes the meaning of the grade from a single letter to an overall assessment of the student’s achievement (Guskey & Jung, 2010). Assigning grades based on levels of performance with an emphasis on standards makes grading more challenging, although it gives students and parents a clearer and more meaningful feedback regarding a student’s performance (Guskey & Jung, 2010).

As indicated in Scherer (2011), “Parents and family members have multiple views of grading, with many viewing grading as indicators of their child’s status in the class” (p. 7). Guskey and Jung (2010) differentiated three types of learning principles related to high-quality grading and reporting systems related to standards:

1. A product criterion highlights what students currently know and are able to accomplish at a particular time. Product criteria relates to students’ specific achievements and levels of proficiency on overall assessments of learning.
2. Process criterion relates to students’ behaviors towards reaching their current levels of achievement and proficiency. Process criteria include behavior, participation, work habits, and punctuality.

3. Progress criterion communicates how much a student grows academically from their learning experiences. This area of criteria focuses on how far students have grown educationally. (p. 32)

Guskey and Jung (2010) continued, “The most effective grading and reporting systems establish clear standards based on product, process, and progress criteria, and then report each separately” (p. 32). Fink (2013) supported, “Grades that only reflect mastery of subject material may inadvertently reinforce a fixed mind-set” (p. 31).

Many school districts strive to report grades which are accurate, consistent, meaningful, and supportive of learning; changes within grading practices are an effort to support and reach those criteria (Bowers, 2011). Unfortunately, it may be found teachers assign grades for not only academic knowledge, but also student behaviors and classroom performance issues, termed “hodgepodge” and “kitchen sink grading” (Bowers, 2011, p. 142). Accountability for educational results became the focus for changing grading practices and reporting beliefs, and for the challenges to professional freedom over what schools do and what schools communicate to students, parents, employers, and the community on performance (Crump, 2004).

Educators would certainly prefer that motivation to learn by students be intrinsic, based on the efforts students put forth (Guskey, 2009). Guskey (2009) noted, “Studies show that most students view high grades as positive recognition of their success, and some work hard to avoid the consequences of low grades” (p. 14). Guskey (2009) continued to state no studies support the use of low grades as punishment, although some teachers consider grades as a weapon of last resort. Guskey (2009) asserted, “Rather than attempting to punish students with a low grade in the hope it will prompt greater effort in

the future, teachers can better motivate students by considering their work as incomplete and then requiring additional effort” (p. 14). With this idea in mind, some school districts have created grading policies that eliminate failing grades altogether (Guskey, 2009).

The pedagogy of changing current grading and reporting practices is challenging to some (Crump, 2004). Shippy, Washer, and Perrin (2013) added, “Our attitudes toward grading are often set by the way we were graded as students, personal beliefs, district policies, or by undergraduate degree programs” (p. 2). When school districts think about changing the current system of grading, education standards should represent the goals of teaching and learning, rather than the non-cognitive behavioral aspects of grading (Shippy et al., 2013).

Guskey (2009) described what educators want students to know and be able to do as a result of experiences in school. Guskey (2009) continued, “Well-defined standards identify the specific knowledge, skills, abilities and disposition that we hope students will acquire through interactions with teachers and fellow students in school learning environments” (p. 52). Efforts in aligning grading and reporting practices can sometimes be challenging. Guskey (2009) concluded, “From the traditional recording of students’ success of sorting students to the standards-based of educating all students, traditionally placing the emphasis on what is being taught to now placing the emphasis on what is being learned” (p. 80).

Educators at both the elementary and secondary levels are beginning to take a closer look at current grading and recording policies and practices. Guskey (2009) noted, “School districts across America are considering revisions in grading policies and

practices, and some have even taken the challenge of developing a new grade card” (p. 32). According to McMillan et al. (2002):

Given the variety of assessment and grading practices in the field, the increasing importance of alternative assessments, the critical role that each classroom teacher plays in determining assessments and grades, and the trend toward greater accountability of teachers with state assessment approaches that are inconsistent with much of the current literature, one needs to fully understand current assessment and grading practices. (p. 203)

Guskey and Bailey (2010) noted, there are three important reasons for making grading and reporting changes at this time. Guskey and Bailey (2010) stated, “First, a lot of current grading and reporting policies and practices are shamefully inadequate” (p. 4). The second most important reason for making changes is misalignment of existing report cards with current reforms in teaching and learning, (Guskey & Bailey, 2010). Guskey and Bailey (2010) concluded, “Lastly, the thoughtful and well-informed initiatives to develop new reporting forms often prompt discussions about other origins of schooling, which can be crucially important to student success” (p. 4).

Most countries have some form of educational standards. In the United States, educational standards began to emerge in the 1980s (Rothman, 2012). During this time supporters believed student learning would improve if states specifically defined what all students should know and be able to do within the educational system (Rothman, 2012). According to Mayes (2014), “The goal of raising academic achievement in the United States has led to a number of remedies, ranging from the No Child Left Behind Act (2001) to the Common Core State Standards (2010)” (p. 6). Results of the NCLB and

CCSS initiatives promoted not only more testing but more complex testing of students (Mayes, 2014). Advocates highlighted teacher preparation, curriculum, and testing as aligned to those expectations (Mayes, 2014).

The efforts behind states adopting their own standards for students were based on national documents. The efforts were encouraged by legislation during the Clinton administration, which gave funding to states to encourage the development of state standards (Mayes, 2014). By the end of the 1900s, all but one state (Iowa) had developed state standards, although the standards varied from state to state and were inconsistent (Mayes, 2014). State assessments affected the standards, and “In theory the assessments should have measured what the standards expected, but in practice, that did not happen” (Mayes, 2014, p. 58). The assessments measured what was easiest to measure, which was low-level knowledge and skills rather than the more difficult skills included in the standards (Mayes, 2014). Mayes (2014) concluded, “In Congress, the Republican Party destroyed an agency designed by the President Clinton administration that would have assessed state standards and national benchmarks” (p. 58).

The need for national standards became more and more evident. The NCLB (2001), enacted in 2002, was unrealistic and focused on all students reaching competence in the subjects of reading and mathematics by 2014. With this act in place, states were required to create individual state standards and assessments to reach the area of proficiency (NCLB, 2001). NCLB (2001) required all states to administer the National Assessment of Educational Progress (NAEP), a federal testing program.

Soon after the law went into place, NCLB (2001) was critiqued by school leaders and teachers. NCLB (2001) added, “The rise of globalization also made it clear that

higher standards were needed and those boundaries between states were becoming less important” (p. 59). Eisenkraft and Eisenkraft (2011) noted:

At a time when students are increasingly forced to prepare for or take high-stakes tests because of No Child Left Behind (NCLB), it is imperative that the education community come to a consensus about what we are looking for when we evaluate assessments at attempt to assure consistency across different graders. (p. 1)

The developers and writers of the CCSS were guided by the words “fewer, higher, clearer” (Eisenkraft & Eisenkraft, 2011, p. 32). Wood (2013) stated:

The new accountability system will make the states more in line with a national education initiative called Common Core Standards, which broadly sees to increase college and career readiness as well as close the achievement gap that has historically left students behind. (p. 32)

The final versions of the CCSS were released in June 2010 and were accepted widely across the United States (Wood, 2013).

As states began adopting the CCSS in the subject areas of English language arts (ELA) and mathematics (MA), and as educators moved toward a more constant understanding of what students must master, standards-based grading and reporting grew to become more popular among educators at all grade levels (Spencer, 2012). While the standards hold a great deal of potential for improving the education system across America, they also face a number of trials (Spencer, 2012). One challenge posted is financing (Spencer, 2012). Developing new assessments for the CCSS can be expensive, as is buying new materials and providing school leaders and educators with professional development opportunities (Spencer, 2012).

According to O'Connor (2009), "Traditionally report cards, especially for secondary schools, have been little more than a list of grades and brief comments about student progress and behavior" (p. 220). O'Connor (2009) continued, "Factors such as effort and attitude are still essential, but are not part of the students' academic grade and are communicated in a separate way" (p. 225). A common view of the purpose behind grading is to measure mastery of a particular subject (O'Connor 2009). Other educators believe that grading measures both mastery and motivation (O'Connor, 2009). Students may accept these factors, yet also view grades as a key to future success in college, technical school, or the work force (O'Connor, 2009).

Goodwin (2011) explained high school students and their families should expect high school grades to at least serve as a reliable benchmark by which to measure students' readiness for college, technical school, or the work force. There is evidence "good marks in high school may not represent the imprimatur of college preparedness that we expect" (Goodwin, 2011, p. 81). Salend and Duhaney (2002) noted, "Grading policies should address and be adaptable to range of situations that students and teachers may encounter" (p. 12). Guskey (2009) stated, "A meaningful grade is one that clearly communicates what learning has taken place" (p. 41). Wilson (2002) added, "As a general rule, the assignment of grades in the classroom serves two functions: compare students against some abstract standard of academic performance and motivate students to study" (p. 97). A classroom of this type scores student performance according to standards, rather than types of assignments such as tests, homework, and extra credit (Wilson, 2002). This scoring methodology makes it simple to identify areas of strength and areas of weakness to be addressed with the students (Wilson, 2002).

To create a standards-referenced system, a district must first restructure or reform state standards into an arrangement which can be used to track student progress using scores from formative and summative assessments (Marzano, 2010). According to Guskey and Bailey (2010):

The main purposes of report cards should be to communicate information about students achievement to parents and others, provide information to students for self-evaluation, select, identify, or group students for certain educational paths or programs, provide incentives for students to learn, evaluate the effectiveness of instructional programs and lastly to provide evidence of students lack of effort or inappropriate responsibility. (p. 27)

Most believe the main purpose of report cards should be communication and evaluation of student progress; however, educators often disagree on which purpose is most important (Guskey & Bailey, 2010). O'Connor (2009) believed, "Grades should be effective communication vehicles, and the methods used to determine them need to provide optimum opportunities for student success and to encourage learning" (p. 47).

Discussions regarding grade cards must be focused, informative, inclusive, and purposefully led if stakeholders are to grasp which changes are to be made (Marzano, 2010). Research by both Marzano (2010) and Guskey (2009) showed standards-based report cards are detailed and specific. Guskey (2009) continued to inform there are five problem areas which have proven particularly challenging to those involved in standards-based reform initiatives. Guskey (2009) added, "The five problem areas are long established tradition-based grading policies and practices that pose obstacles to the

implementation of standards-based grading” (p. 2). The five problem areas include the following:

(a) Assigning fair and accurate standards-based grades to students with special learning needs, (b) assigning fair and accurate standards-based grades to students who are English language learners, (c) communicating meaning of those grades to parents and guardians, (d) legal issues that influence grading and reporting policies in an era of high-stakes accountability, and (e) inconsistencies between students’ report card grades and their performance on other large-scale assessments. (Guskey, 2009, p. 3)

The goal of organizational change in schools is to increase student learning. The change involves the educators’ implementation of new classroom practices, which in turn will impact schools, districts, and states (Guskey, 2009). Hall and Hord (2014) stated, “Educational change does not only involve teachers; it also involves leaders who serve as facilitators” (p. 17).

According to Yukl (2010):

Change efforts in organizations are more likely to succeed if leaders understand the different types of change, the reasons people tend to accept or reject change, the phases in the change process, and how to effectively use a model for understanding problems in the organization. (p. 301)

In the occasion of implementing a new grade card model, changes in philosophies, technology, practices, communication, and the reporting tool all require consideration and focus (Yukl, 2010). A strategy to use during the change effort is to involve students in grading and assessment practices.

According to O'Connor (2009), "When students know how they will be assessed, and especially when they have been involved in assessment decisions, the likelihood of student success is increased greatly" (p. 186). O'Connor (2009) described discussion factors that are involved in student involvement and assessment. The first factor is the evenness between student involvement and decision making by the teacher (O'Connor, 2009). O'Connor (2009) highlighted, "Giving students real opportunities for meaningful input into decisions about the how and what of classroom assessment, including grading, does not mean that students take over the teacher's professional responsibility to decide about assessment and to determine grades" (p. 187).

The involvement in assessment on the student's part must be age appropriate (O'Connor, 2009). O'Connor (2009) asserted that involving students with assessment at an early age is appropriate, and by doing so, this will format student assessment vocabulary. O'Connor (2009) asserted, "Timing is critical so that students see that assessment is integral, not just an add-on, to learning" (p. 189). Information about how the instructor will assess and determine grades must be clear and brief (O'Connor, 2009). Finally, discussing assessment and situations with the students at the beginning of the instruction period is important (O'Connor, 2009). O'Connor (2009) noted, "Ideally, teachers discuss assessment with students and provide a written assessment plan, including grading for each course, but these assessment plans are not carved in stone" (p. 190). Teachers must be flexible and allow room for changes to be made (O'Connor, 2009).

Traditional report card. According to Marzano (2010), "The traditional grading system indicates traditional letter grades A, B, C, D, and F, based on a cumulative 100

point grading system” (p. 40). Traditional symbol grading systems are the most commonly used grading systems (O’Connor, 2009). Traditional grading is based on simple letter grades, assessments based on teacher’s defined principles, and single completed grades per student based on a mixture of related and unrelated assessments of skills, knowledge, and performance over a period of time (Marzano, 2010). According to Marzano and Heflebower (2011), “In the traditional grading system, students acquire points for various activities, assignments, and behaviors, which accrue throughout the grading period” (p. 34).

Traditional grading has been a part of the educational process in the United States for centuries. Most of the United States population understands traditional grading methods, because those methods have been used since before the twentieth century (Guskey et al., 2011). Guskey et al. (2011) argued, “Parents are comfortable with their child receiving a final letter grade for a course and understand the implied meaning of a grade such as a B or 94%” (p.53).

According to O’Connor (2009), “Many critics of grading favor the use of checklists or rating scales because they provide real rather than symbolic information” (p. 206). The traditional grading system is usually based on all assignments given in class, including homework, class assignments, activities, projects, quizzes and tests (Erickson, 2011). Historically, traditional grades are entered into a grade book based on the type of assignment, rather than the particular standard or objective for the course (Erickson, 2011). Erickson (2011) contributed, “Grades should reflect only what a student knows and is able to do” (p. 66). Traditional grading systems are often subjective (Erickson, 2011). The final grade at the end of the course does not give students or parents an

adequate picture of progress on all of the grade-level standards (Erickson, 2011). Reeves (2011) noted there is nothing wrong with letter grades. What has rendered the traditional grading system less valid is that letter grades, in the absence of additional information, are inaccurate and misleading (Reeves, 2011). Townsley (2013) explained, “Reporting of learning targets is a standards-based approach, rather than reporting solely on assignments, assessments and behaviors” (p. 68).

Traditional letter grades have two major disadvantages. One disadvantage is assigning a single letter grade to students per subject area in which they are enrolled (Guskey & Jung, 2006). Teachers must provide evidence from a multiple array of source examples into that one marking (Guskey & Jung, 2006). Secondly, a single letter grade provides no detailed information about what specific standards or objectives were learned (Guskey & Jung, 2006). A standards-based grade provides a breakdown of each standard within a subject area and gives a detailed description of student progress (Guskey & Jung, 2006). Guskey and Jung (2006) concluded, “Standards-based grading thus facilitates collaborative efforts on the part of parents and educators to help students improve their performance” (p. 2).

According to O’Connor (2009), “Traditional report cards have very little but a list of grades and brief comments about the progress that the student is performing and their classroom behavior, but rather meaningless comment that does very little to provide understanding of student achievement” (p. 23). Traditional grading may also include points for non-academic factors, such as participation, effort, and attitude (O’Connor, 2009). Teachers often implement grades to build a student’s self-esteem (O’Connor, 2009). As a measure of student learning, traditional grades are often invalid, as teachers

commonly use criteria unrelated to evidence-based student learning (Wegwert, 2012). Cox (2011) found, “Current report cards at the secondary level look similar to how they did when the ‘Committee of Ten’ convened in 1892 to consider high school reform” (p. 68). At the secondary level, “letter grades (A-F) designate relative levels of student performance, and students’ grade point averages are computed on a 4-point scale” (Cox, 2011, p. 68). Guskey and Jung (2010) concluded, “With a high-quality grading system in place, schools can develop fair and accurate procedures for reporting on the achievement of exceptional learners” (p. 33).

Standards-based report card. Jacobs (2010) noted, “In essence, a standard defines what a student should know, understand, and be able to do in each subject area and grade level” (p. 6). Standards-based grading is a process of grading in which students are evaluated specifically on their mastery of a specific skill or standard (Phillips & Wong, 2012). Marzano (2010) noted, “Grading that references student achievement to specific topics within each subject area is growing in popularity” (p. 17). Marzano (2010) supported that standards-based grading is considered the most appropriate method of grading.

Effectively understanding the importance of standards is the essential first step in developing a standards-based report card (Guskey & Bailey, 2010). Guskey and Bailey (2010) defined, “In simplest terms, standards in education are the goals of teaching and learning” (p. 13). The definition of standards provides a foundation for the development of report cards (Guskey & Bailey, 2010). Most standards include two factors (Guskey & Bailey, 2010). The first component is content, which represents what teachers want students to learn (Guskey & Bailey, 2010). Content can also be described as standards,

expectations, outcomes, and learning results (O'Connor, 2009). The second component is performance (Guskey & Bailey, 2010). Performance represents what teachers want students to be able to do with the material learned (Guskey & Bailey, 2010). Performance can also be described as benchmarks, indicators, and achievement charts (O'Connor, 2009). O'Connor (2009) concluded, "These two types of standards should form the basis of both classroom-level and large-scale assessments" (p. 8).

In an era of student accountability and high-stakes testing, standards-based grading is becoming an important component in educational research (Phillips & Wong, 2012). Marzano (2010) added, "In a standards-based system, student success is measured by a student's mastery of the essential standards for a class, or how well the student understands the material in class" (p. 17). Guskey (2009) noted, "Standards-based progress reports differ from traditional letter grade, percentage, narrative, or pass/fail report cards by requiring teachers to report student performance levels on specific educational goals instead of broad content areas" (p. 75).

According to Marzano and Heflebower (2011), due to shortcomings in the educational system, standards-based grading and reporting have become topics of discussion for years. In standards-based education settings, educators and students merge in efforts to have everyone learn well (Marzano & Heflebower, 2011). Guskey (2014) noted, "Standards-based teachers adapt instruction to individual student needs in order to help all students develop their talents and master agreed-upon learning goals" (p. 15). Standards-based grading and reporting requires teachers to record student progress toward meeting state standards (Guskey, 2009). Bolt (2010) determined:

Progress monitoring has become a critical tool to precision teaching, data-based program modification, curriculum based measurement, curriculum based assessment, instructional consultation, Response to Intervention (RTI), and the variety of collaborative problem solving team models referred to as teacher assistance teams, mainstream assistance teams, instructional support teams, and Individualized Education Plan (IEP) teams, among others.” (p. 613).

Bolt (2010) noted state progress monitoring efforts have been successful, although implementation has been difficult. Safer and Fleischman (2005) added, “Student progress monitoring is a practice that helps teachers use student performance data to continually evaluate the effectiveness of their teaching and make more informed instructional decisions” (p. 81). Safer and Fleischman (2005) also stated teachers who use student progress monitoring in classrooms will see high student performance, the improvement of teacher judgment, and students more attentive of individual achievement. Bolt (2010) revealed educators who use progress monitoring frequently comment on the effectiveness of moving students up and down the continuum. At the same time, educators report unpredictability in student performance, differential application by teachers, and difficulty supporting established effective interventions (Bolt, 2010).

Guskey (2009) added, “Grading students according to standards attainment hopefully encourages teachers to better align their instruction and assessment to the state standards” (p. 76). The standards-based grade card based on a four-point scale is to provide more detailed feedback to the students’ families regarding the progress their children are making towards specific learning goals or standards at their grade-level (Guskey, 2014). Brookhart (2011) concluded, “Standards-based grading is based on the

principle that grades are not about what students earn; they are about what students learn” (p.13).

A true standards-based grading and reporting system would have only two basic levels of performance: proficient or not proficient (O’Connor, 2011). Guskey (2009) noted, “This reporting format should also strengthen the connection between performance in school and on the state test” (p. 76). Students and their families should easily be able to predict the outcome of state test performance (Guskey, 2009).

However, at most grade-levels there is a scale based upon a four-point system:

- 4/ Advanced: Exceeding Learning Standards.
- 3/Proficient: Meeting Learning Standards.
- 2/Developing: Workings toward Learning Standards.
- 1/Beginning: Not Meeting Learning Standards.
- Blank: Not Assessed at This Time. (Guskey, 2009, p. 21)

Guskey (2009) stated the four main steps which must be taken to produce accurate standards-based grade cards, including, “First the learning goals that define what students will know and do must be articulated” (p. 80). Indicators of student performance aligned with each standard must be noted by the teacher (Guskey, 2009). Teachers must align lessons and activities that will clearly indicate each student’s progress toward the learning goal (Guskey, 2009). Guskey (2009) continued, “The third step requires teachers to define graduated steps of performance that indicate a student’s development on multiple performance levels” (p. 80). The levels of performance include, falling behind, approaching, meeting, and exceeding (Guskey, 2009). Guskey (2009) asserted the second and third steps are the most challenging for teachers. The final step that must be taken to

produce an accurate standards-based grade card is using reporting tools to effectively communicate with students and their families (Guskey, 2009).

With the standards-based approach students are not trapped into an exact grade level based on age; rather, for each content area, students move up and down the range of knowledge based on verified proficiency (Guskey & Bailey, 2010). In a pure standards-based approach, there are no grade levels, but there are simply levels of knowledge and skill for each subject area (Guskey & Bailey, 2010). A solution to the difficult task of guaranteeing students get on-track is to offer clear, detailed, specific, school-wide standards for modification of work assignments that are late (Guskey & Bailey, 2010). A standards-based grading approach to assessment still holds students responsible for the work they need to do to show growth, but it leaves teachers the freedom to individualize and leave the students free to focus on learning (Guskey & Bailey, 2010).

Guskey and Jung (2006) noted, “A standards-based report card allows teachers to report on the adequacy of students’ academic achievement, as well as their attitudes, efforts, participation, and work habits” (p. 2). O’Connor (2009) also asserted, “Effort, participation, attitude, and other personal and social characteristics need to be reported separately from achievement” (p. 95). O’Connor (2009) noted, extra credit and bonus points should not be included, in that “grades are supposed to be measures of achievement, so it is appropriate that students have extra opportunities to improve their grades, but these opportunities must involve demonstration of the knowledge and skills in the standards” (p. 104). While grading class participation can be subjective, the performance feedback students receive in the real world can also be highly subjective (Mello, 2010). O’Connor (2009) suggested class participation is frequently a personality

issue, while some students are more outgoing and others are naturally quieter. O'Connor (2009) noted including participation in grades is supporting bias.

For children in early grades, such as preschool and kindergarten, school is more than academics alone. The purpose for school includes a variety of social skills which will develop better students (Rodgers, 2011). Understandably, this is why elementary students receive grades for non-academic work habits and behaviors (Rodgers, 2011). Standards-based grading provides more reliable information yet measures all students fairly on comparable scales, as opposed to traditional grading practice which provides a single letter grade focused on combined criteria (Rodgers, 2011).

Using a standards-based reporting system is a more accurate way to inform students and parents about specific areas of proficiency as well as areas of challenge (Rodgers, 2011). When improving parent communication, it is important to maintain a similar standards-based reporting format across the grade levels (Rodgers, 2011). Maintaining consistency in standards-based grading is important for interpreting and reporting grades year to year as students move from one grade level to the next (Smith, 2012). Standards-based grading takes the inaccurate guesswork out of assigning different weights to homework and tests (Smith, 2012). Smith (2012) noted, "Standards of proficiency create concrete targets toward which assignments can be geared, so that teachers can focus on teaching toward specific learning objectives and assessing each student's level of proficiency" (p. 1). When clear and precise learning goals and standards are developed, standards-based grade cards offers information about student achievement and performance (Smith, 2012). Guskey and Jung (2006) added,

“Standards-based grading facilitates teaching and learning better than almost any other grading method” (p. 8).

Although all grading methodologies have shortcomings, standards-based grading is hard work and requires a significant amount of time for educators and school leaders (Guskey & Jung, 2006). Educators must not only identify learning goals or standards on which grades reflect, but must also decide what evidence best proves student achievement of each goal and standard (Guskey & Jung, 2006). Educators must develop reporting tools which communicate student learning progress (Guskey & Jung, 2006).

The frequency of completing and distributing report cards is a topic about which teachers and parents consistently have different opinions (Guskey & Bailey, 2010). Parents frequently ask for report cards to be sent home more often (Guskey & Bailey, 2010). Families are satisfied with the distribution of report cards every nine weeks, but state that every six weeks would be better (Guskey & Bailey, 2010). Guskey and Bailey (2010) noted, “More frequent reports help parents keep abreast of their child’s progress in school” (p. 2). The frequency of report cards also helps parents identify areas in which their child needs more support (Guskey & Bailey, 2010). Conversely, teachers regularly argue for less frequent completion and distribution of report cards (Guskey & Bailey, 2010). Teachers believe the distribution of report cards every nine weeks is satisfactory, although every 12 weeks would be better (Guskey & Bailey, 2010). Guskey and Bailey (2010) added, “Teachers point out that completing report cards requires a lot of time and detracts from their instructional planning” (p. 2). Furthermore, teachers feel uncomfortable assigning grades based on information reported over shorter time periods (Guskey & Bailey, 2010).

Another challenge of standards-based learning is communicating the effectiveness with parents (Guskey & Jung, 2006). Parents find the reporting forms complicated therefore, classroom teachers must provide parents with rich information and define and describe learning goals in detail to parents (Guskey & Jung, 2006). Guskey and Bailey (2010) noted, “Most teachers and school administration want to do a better job communicating student learning, especially to parents” (p. 203). Guskey and Jung (2006) concluded, “Developing a new report card is more a challenge in effective communication than simply documenting or quantifying student achievement” (p. 1).

When developing a new report card, it is important to clarify the purpose of a grading transition (Guskey & Jung, 2006). Guskey (2009) noted, “To successfully implement standards-based reforms, educational leaders must take a broader and more systematic view of their efforts” (p. 22). Guskey (2009) suggested rather than solely focusing on curriculum and assessment concerns, schools must expand their outlook to consider organizational policies that affect success, especially in the areas of grading and reporting student learning.

One of the most common purposes in developing a new report card is to more effectively communicate student achievement to parents (Guskey & Jung, 2006). Parents must understand the information on the report card and know how to recognize student successes or deficits (Guskey & Jung, 2006). For report cards to be accepted by parents in a positive way, school leaders and educators should include parents during the early stages of planning, building, and implementing (Guskey & Jung, 2006). The largest adjustment for teachers in moving to a standards-based grading model from the traditional approach is perhaps the teacher’s mentality toward the new approach. An

example would be to convince faculty and staff that standards-based grading is a meaningful and sensible way to monitor and report student achievement (Oliver, 2011).

While developing a standards-based report card, parents occasionally will express uncertainty (Guskey & Bailey, 2010). It is common for parents to express belief the traditional letter grade and percentage system works well, and they see no reason for change (Guskey & Bailey, 2010). Parents feel comfortable with the letter grade system, because they were graded and assessed with the traditional grading system (Guskey & Bailey, 2010). Guskey and Bailey (2010) noted, “As a part of their improvement efforts, educators need to pay special attention to helping these parents understand the problems associated with traditional letter grades, as well as the benefits of moving to a standards-based system” (p. 6).

Guskey and Jung (2006) noted, “Although teachers can use standards-based grading at any grade-level and in any area of study, most current applications are used at the elementary level, where there is little curriculum differentiation” (p. 8). At the middle school and high school levels students are engaged in more varied areas of study. These areas of difference will result in a variance of standards-based reporting among students (Guskey & Jung, 2006).

Standards-based report cards are becoming commonplace at the elementary level, but secondary level report cards are appearing to stay in the traditional format (Cox, 2011). Very few middle school and high school educators have embarked on the standards-based journey (Cox, 2011). Grades are increasingly vital in our nation’s schools and can become the concentration of a great deal of pressure between teachers and students at the elementary and middle school levels (Randall, 2009).

Zemelman, Daniels, and Hyde (2005) spoke to the meaning of standards-based grading versus assigning letter grades. Educators often grade, test, and score students more frequently than needed to effectively guide instruction (Zemelman et al., 2005). Teachers fail to use data on a regular occurrence to guide successful instruction for individual students (Zemelman et al., 2005).

In classrooms where teachers consistently work with students, complex grading systems are unnecessary, unhelpful, redundant, and sometimes inconsistent (Zemelman et al., 2005). Zemelman et al. (2005) continued, “Teachers can produce a perfectly adequate documentation of students’ growth through the occasional sampling of their work, periodic observations, and once-in-awhile examination of their products” (p. 310). When teachers exchange traditional methodology for the standards-based pedagogy, there is little problem explaining the grades given (Zemelman et al., 2005). Transitioning to the standards-based grading method allows for teacher reflection on student work, rather than overemphasis on scoring, computing, averaging, and justifying grades (Zemelman et al., 2005).

Implementing a successful standards-based grading and reporting system demands a positive relationship among teachers, parents, and building and district leaders (Guskey, 2011). Guskey (2009) noted, “The fundamental purpose of standards-based grading is to compare student performance to established levels of proficiency in knowledge, understanding, and skills” (p. 108). Guskey and Bailey (2010) added, “A standards-based report card breaks down each subject area or course into specific elements of learning” (p. 7).

Oftentimes, educators fail in their efforts of developing and implementing standards-based report cards (Guskey & Bailey, 2010). The reason for failure is that school leaders charge ahead without first clarifying the report card's purpose (Guskey & Bailey, 2010). Guskey and Bailey (2010) added, "Before any revision can be planned and any development work begun, the purpose of the report card must be made clear" (p. 21). To make the purpose of the standards-based report card known, Guskey and Bailey (2010) recommended the purpose be printed directly onto the report card. The statement of the report card's purpose communicates the specific aim of the report card, to whom the information is proposed, and how the information may be used in the future (Guskey & Bailey, 2010).

To successfully develop and implement a reporting form, school and district leaders should accurately interpret and prepare parents on the meaning behind the standards and the interpretation of the levels of achievement in relation to the standards being assessed (Guskey, 2011). School leaders must ensure parents are familiar with the terminology of the reporting card (Guskey, 2011). Once all components are in place, all groups will understand what grades mean and how grades are used to improve student learning (Guskey, 2011). Spencer (2012) stated, "Advocates acknowledge that the staggering amount of information that standards-based grading produces, even on well-edited report cards, is really only as good as students' ability and willingness to take advantage of it" (p. 10).

Summary

There is significant power in student learning when there is seamless alignment of curriculum, instruction, assessment, and reporting (Stiggins, 2005). The ultimate goal of standards-based grading practices is to teach, assess, improve, and communicate about student learning in relation to academic learning standards (Stiggins, 2005). Stiggins (2005) stated, “With standards-based grading, teachers can focus less time on providing subject area grades and still accomplish the goal of moving toward rich, descriptive performance statements that provide specific information about where the student is relative to each standard” (p. 331).

With increased pressure for classroom accountability, combined with the ability to report and track student and school data, standards will continue to be important to the educational process (Stiggins, 2005). As schools begin transitioning from traditional reporting to standards-based reporting and begin aligning grading practices to curriculum and standards, there is a clear paradigm shift in the thoughts for grading (Stiggins, 2005). O’Connor (2009) concluded:

To have grades that have real, not just symbolic, meaning and to enable us to focus on learning, not just accumulation of points, grading must be seen not as a numerical, mechanical exercise but as an exercise in professional judgment. (p. 195)

The literature reviewed in Chapter Two clearly supports standards-based grading, noting the benefits of creating clear indicators of what students should know, understand, and be able to do.

Chapter Two highlighted the conceptual, historical, and contextual basis of teacher preparation, effective classroom practice, and grading practices. Chapter Three explains the research design, highlighting the research questions and hypotheses that served as a guide throughout the study, as well as an overview of the research problem and purpose, sample population selection, instrumentation used for data collection, and the statistical procedures employed. Chapter Four then includes the analysis of the data, followed by a discussion of results and recommendations for future research in Chapter Five.

Chapter Three: Methodology

This quantitative study involved an examination of whether teacher-assigned standards-based grades or teacher-assigned traditional grades provided more precise data for all students of the sample, by comparing mean scores on the Missouri Assessment Program (MAP) grade-level assessments from spring 2013 and spring 2014 in ELA and MA. The MAP, a standardized assessment given to students in grades three through eight in the state of Missouri, is considered a measure of student learning and was used in this study to provide a comparison of mean scores to teacher-assigned standards-based grades and teacher-assigned traditional grades, indicating whether standards-based or traditionally reported grades provided a more effective measure of student academic success (MODESE, 2014).

The purposes of Chapter Three are to describe the following: (a) sample population selected for this study; (b) instruments used for data collection; (c) methods, materials, and procedures used to collect the data for the study; and (d) selection and use of statistical procedures employed in the analysis of collected data.

Problem and Purpose Overview

School District A recently implemented standards-based grade cards in kindergarten through fourth grade. The purpose of this research project was to determine if there was a significant line of fit between standards-based teacher-assigned grades and student achievement or between teacher-assigned traditional grades and student achievement. The results from this study will be made accessible to stakeholders and will be available to inform district policy and to determine the expansion of standards-based grade cards into the middle school in School District A.

Research Questions and Hypotheses

1. What is the relationship between teacher-assigned standards-based grades and student achievement scores on the Missouri Assessment Program (MAP) grade-level English Language Arts (ELA) assessment in one rural elementary school?

H1₀: There is no relationship between teacher-assigned standards-based grades and student achievement scores on the Missouri Assessment Program (MAP) grade-level English Language Arts (ELA) assessment in one rural elementary school.

2. What is the relationship between teacher-assigned traditional grades and student achievement scores on the Missouri Assessment Program (MAP) grade-level English Language Arts (ELA) assessment in one rural elementary school?

H2₀: There is no relationship between teacher-assigned traditional grades and student achievement scores on the Missouri Assessment Program (MAP) grade-level English Language Arts (ELA) assessment in one rural elementary school.

3. What is the relationship between teacher-assigned standards-based grades and student achievement scores on the Missouri Assessment Program (MAP) grade-level Mathematics (MA) assessment in one rural elementary school?

H3₀: There is no relationship between teacher-assigned standards-based grades and student achievement scores on the Missouri Assessment Program (MAP) grade-level Mathematics (MA) assessment in one rural elementary school.

4. What is the relationship between teacher-assigned traditional grades and student achievement scores on the Missouri Assessment Program (MAP) grade-level Mathematics (MA) assessment in one rural elementary school?

H₄₀: There is no relationship between teacher-assigned traditional grades and student achievement scores on the Missouri Assessment Program (MAP) grade-level Mathematics (MA) assessment in one rural elementary school.

Research Design

This correlational study was designed to determine whether teacher-assigned grades on standards-based report cards or letter grades on traditional report cards provided a more accurate predictor of student achievement on the MAP standardized assessment. This study involved a census sample of all elementary students from years 2012-2013 (third grade) and 2013-2014 (fourth grade) who were still enrolled in School District A. Data were collected from 120 students from Elementary School A in rural Missouri. The Pearson product-moment correlation coefficient (denoted by *r*) was used to determine if teacher-assigned grades on standards-based report cards or letter grades on traditional report cards provided a more accurate measure of student achievement on the MAP standardized assessment, in the areas of ELA and MA.

Prior approval from the school district was sought and granted through electronic communication with the elementary principal and the assistant superintendent. There was no human participation included in this study.

Population and Sample

The study was conducted within School District A, in rural Missouri, which had a population of 2,651 students. The study focused on Elementary School A within School District A. Elementary School A had a population of 681 students. For this study, the researcher used a census sampling of elementary students from years 2012-2013 (third grade) and 2013-2014 (fourth grade) who were still enrolled in Elementary School A

during the 2014-2015 school year, which included 120 elementary students. A census sample is chosen to acquire data from every member of the population to more comprehensively inform the results of this study and will more accurately yield information for all subgroups of the population (Fraenkel et al., 2015).

Instrumentation

Missouri Assessment Program (MAP). This study involved collection of archival assessment data from a standardized assessment required by the MODESE. The data derived for this study had been previously standardized and widely recognized. The MAP is designed to assess students' progress toward mastery of the Show-Me Standards which are the educational standards in Missouri (MODESE, 2014). All students in grades three through eight in Missouri are required to take the grade-level assessment (MODESE, 2014). ELA and MA are administered in all grades, and science is administered in grades five and eight (MODESE, 2014).

Standards-based report cards. Elementary School A within School District A implemented standards-based report cards in kindergarten through fourth grade during the 2013-2014 school year. Standards-based report card data from the 2013-2014 school year were used to statistically determine if there was a relationship between teacher-assigned standards-based grades and student achievement. This form of instrumentation was important to the project, because the Pearson product-moment coefficient of correlation was used to determine the strength of linear association for standards-based grades to the student performance levels for the MAP grade-level assessments in the areas of ELA and MA.

Traditional report cards. Elementary School A within School District A used traditional report cards in kindergarten through fourth grade until standards-based report cards were implemented during the 2013-2014 school year. Middle School A within School District A currently uses the traditional grading methods in grades five through eight. Traditional report card data from the 2012-2013 school year were used to statistically determine if there was relationship between teacher-assigned traditional grades and student achievement. This form of instrumentation was important to the project because the Pearson product-moment coefficient of correlation was used to determine the strength of linear association for traditional grades to the student performance levels for the MAP grade-level assessments in the areas of ELA and MA.

Data Collection

After gaining approval from the Internal Review Board (IRB) at Lindenwood University (see Appendix A) and from School District A, the researcher began collecting data to conduct the research. Prior to the implementation of this study, a thorough review of literature was completed.

Permission was granted by School District A to use permanent grade card data and MAP data for all students of the census sampling. A third party assisted the project by extracting archival MAP data from 2012-2013 and 2013-2014 for a sample of 60-80 third graders who transitioned into fourth grade at Elementary School A. The third party removed all identifiers from the records before granting the researcher access to the desired information. A third party extracted the grades for each student from his or her third grade traditional grade card permanent records for year 2012-2013. A third party then extracted the grades for each student from the sample from his or her fourth grade

standards-based grade card permanent records for school year 2013-2014. The third party removed all identifiers from the records and correlated each Math (MA) and English Language Arts (ELA) grade from year 2012-2013 with the students' corresponding MA and ELA proficiency performance on the MAP grade-level assessment from spring 2013.

The third party removed all identifiers from the records and correlated each Math (MA) and English Language Arts (ELA) grade from year 2013-2014 with the students' corresponding MA and ELA proficiency performance on the MAP grade-level assessment from spring 2014. With all identifiers removed, the researcher conducted a Pearson product-moment coefficient of correlation (Bluman, 2013) to determine the strength of linear association between the traditional grades received by a third-grade sample in 2012-2013 and each student's performance on the MAP grade-level assessment from spring 2013 in ELA and MA.

With all identifiers removed, the researcher conducted a Pearson product-moment coefficient of correlation to determine the strength of linear association between the standards-based grades received by the sample and student performance on the MAP grade-level assessment from spring 2014 in ELA and MA. The researcher then segregated the sample by subgroups and conducted the Pearson product-moment coefficient of correlation to determine the strength of linear association for both traditional and standards based grades to the student performance levels for MAP grade-level assessments from spring 2013 and spring 2014 in ELA and MA. The researcher then compared the sample means of each group within the data to identify whether there was a mean difference (Bluman, 2013).

Data Analysis

In this study, data were analyzed using a Pearson product moment coefficient of correlation, denoted by r , to measure the strength of linear association between variables. Fraenkel et al. (2015) stated, “When it comes to the purpose of research, quantitative researchers seek to establish relationships between variables and look for and sometimes explain the causes of such relationships” (p. 10). MAP grade-level assessment proficiency results were chosen, as these provide standardized information which may readily be compared to teacher grade data. Descriptive statistics were calculated from 2012-2013 teacher-assigned traditional grade card scores and 2013-2014 teacher-assigned standards-based grade card scores. The ELA and MA MAP data for 2012-2013 and 2013-2014 were also calculated. This allowed for examination of the variances between traditional grade data and standards-based grade data to determine which variable draws a line of best fit for determining student performance on state standardized assessment results.

The Pearson product-moment coefficient of correlation is the “appropriate correlation coefficient to use” (Fraenkel et al., 2015, p. 208), as it assumes the relationship may best be described by a straight line. Fraenkel et al. (2015) continued, “Whenever a relationship between quantitative variables within a single group is examined, the appropriate techniques are the scatterplot and the correlation coefficient” (p. 251).

Ethical Considerations

According to the Belmont Report (U.S. Department of Health & Human Services, 1979), there are ethical principles which protect human subjects in research. The

principles underlie the conduct of research along with guidelines established to assure research is conducted in accordance with those principles (U.S. Department of Health & Human Services, 1979). It is the essential responsibility of the researcher to do all in his or her power to guarantee that participants in a research study are protected from physical or psychological harm, discomfort, or danger that may arise due to research actions (Fraenkel et al., 2015). A third party was used to extract data and to redact identifiers to ensure anonymity at all times, and to ensure identification of participants will not be available during or after the study.

Summary

The methods and procedures employed to provide insight into the relationships between teacher-assigned traditional grades and teacher-assigned standards-based grades and student achievement in the content areas of ELA and MA were described in this chapter. The problem, research design, research questions, sample population, and instrumentation were presented. Additionally, the data collection processes, as well as the data analysis of the information attained, were discussed. The presentation of these data in Chapter Four will address the research questions, as well as the demographic information collected. A summary and discussion of the findings, along with conclusions, implications for practice, and recommendations for further research form the content in Chapter Five.

Chapter Four: Analysis of Data

Education is entering a critical phase of redevelopment. With the Race to the Top initiative (U.S. Department of Education, 2014) in place, education reformers have strengthened the focus on continual improvement of our educational system. According to Guskey (2013), “Assessment and grading have become a major focus in education reform” (p. 68). Today’s present grading practices have drawbacks (Guskey, 2013). School districts are striving to make grades fairer, more accurate, and more meaningful (Guskey, 2013).

With school reform targeting standards and assessment practices, providing educators with the information needed to continuously improve teaching and learning is imperative to student success (U.S. Department of Education, 2014). To enrich overall assessment and to ensure mastery of standards, many schools have eliminated traditional report cards and are moving towards standards-based report cards (Marzano & Heflebower, 2011). Focusing grading practices on standards, rather than comparing students to their classmates, seems a natural follow-up to standards-based instruction, and should ideally lead teachers to stronger instruction, which would improve student achievement on state standardized test scores (Marzano & Heflebower, 2011).

The purpose of standards-based grading is to raise student achievement by clearly communicating students’ progress toward learning targets (Marzano & Heflebower, 2011). In Missouri, those targets are identified as Missouri Learning Standards (MODESE, 2014). The purpose of the study was to determine if there was a more significant line of fit between standards-based teacher-assigned grades and student achievement or between teacher-assigned traditional grades and student achievement. For

this study, a census sampling of all elementary students from years 2012-2013 (third grade) and 2013-2014 (fourth grade) in School District A. 120 elementary students from grades three and four with a population of 120 from School District A were sampled. No comparative data existed in School District A regarding the effectiveness of standards-based report cards in kindergarten through fourth grade. This dataset contained four sections: ELA 2012-2013 teacher-assigned traditional grades and MAP student achievement, MA 2012-2013 teacher-assigned traditional grades and MAP student achievement, ELA 2013-2014 teacher-assigned standards-based grades and MAP student achievement, and MA 2013-2014 teacher-assigned standards-based grades and MAP student achievement. The analysis was conducted by identifying the statistically significant relationship using a Pearson product-moment correlation coefficient (denoted by r).

Research Question 1

What is the relationship between teacher-assigned standards-based grades and student achievement scores on the Missouri Assessment Program (MAP) grade-level English Language Arts (ELA) assessment in one rural elementary school?

H1o: There is no relationship between teacher-assigned standards-based grades and student achievement scores on the Missouri Assessment Program (MAP) grade-level English Language Arts (ELA) assessment in one rural elementary school.

A frequency analysis of teacher-assigned standards-based grades in ELA for 2013-2014 revealed of the 120 students from the sample, only 25.0% scored a four, the equivalent of *advanced*, while 11.7% performed *advanced* on the MAP grade-level ELA exam. This revealed a 13.3% difference between the two metrics.

To more closely examine research question one, a Pearson product-moment coefficient of correlation (Pearson r) was calculated to assess the relationship between standards-based grades and MAP ELA scores. The Pearson r determines the strength of a straight linear fit closest to $r = 1.0$ (Fraenkel et al., 2015). There was a strong positive correlation between the two variables [$r = 0.717$, $n = 120$] which was statistically significant [$p = 0.000$]. According to Fraenkel et. al. (2015), an r with magnitude of .61 to .80 indicates a “very important correlation coefficient” (p. 253). The resulting data are presented in Table 1.

Table 1

Correlation of MAP ELA Scores to Standards-Based Grades

		SBG ELA 2013-2014	MAP ELA 2013-2014
SBG ELA 2013- 2014	Pearson Correlation	1	.717**
	Sig. (2-tailed)		.000
	N	120	120
MAP ELA 2013- 2014	Pearson Correlation	.717**	1
	Sig. (2-tailed)	.000	
	N	120	120

Note. Statistical significance is noted at $p \leq 0.05$.

Research Question 2

What is the relationship between teacher-assigned traditional grades and student achievement scores on the Missouri Assessment Program (MAP) grade-level English Language Arts (ELA) assessment in one rural elementary school?

H2₀: There is no relationship between teacher-assigned traditional grades and student achievement scores on the Missouri Assessment Program (MAP) grade-level English Language Arts (ELA) assessment in one rural elementary school.

A frequency analysis of the teacher-assigned traditional grades in ELA for 2012-2013 revealed of the 120 students from the sample, 39.2% scored a letter grade of A, the equivalent of *advanced* while 20% performed *advanced* on the MAP grade level ELA exam. This revealed a 19.2% difference between the two metrics.

To examine research question two, a Pearson product-moment coefficient of correlation (Pearson r) was calculated to assess the relationship between traditional grades and MAP ELA scores. The Pearson r determines the strength of a straight linear fit closest to $r = 1.0$ (Fraenkel et al., 2015). There was a positive correlation between the two variables [$r = 0.545$, $n = 120$] which was statistically significant [$p = 0.000$]. The resulting data are presented in Table 2.

Table 2

Correlation of MAP ELA Scores to Traditional Grades

		Traditional ELA 2012-2013	MAP ELA 2012-2013
Traditional ELA 2012-2013	Pearson Correlation	1	.545**
	Sig. (2-tailed)		.000
	<i>N</i>	120	120
MAP ELA 2012- 2013	Pearson Correlation	.545**	1
	Sig. (2-tailed)	.000	
	<i>N</i>	120	120

Note. Statistical significance is noted at $p \leq 0.05$.

Research Question 3

What is the relationship between teacher-assigned standards-based grades and student achievement scores on the Missouri Assessment Program (MAP) grade-level Mathematics (MA) assessment in one rural elementary school?

H3₀: There is no relationship between teacher-assigned standards-based grades and student achievement scores on the Missouri Assessment Program (MAP) grade-level Mathematics (MA) assessment in one rural elementary school.

A frequency analysis of the teacher-assigned standards-based grades in MA for 2013-2014 revealed of the 120 students from the sample, 20.8% scored a four, the equivalent of *advanced* while 10.8% performed *advanced* on the MAP grade-level ELA exam. This revealed a 10.0% difference between the two metrics.

To examine research question three, a Pearson product-moment coefficient of correlation (Pearson r) was calculated to assess the relationship between standards-based

grades and MAP MA scores. The Pearson r determines the strength of a straight linear fit closest to $r=1.0$ (Fraenkel et al., 2015). There was a strong positive correlation between the two variables [$r= 0.660$, $n =120$] which was statistically significant [$p =0.000$]. The resulting data are presented in Table 3.

Table 3

Correlation of MAP MA Scores to Standards-Based Grades

		SBG MA 2013-2014	MAP MA 2013-2014
SBG MA 2013-2014	Pearson	1	.660**
	Correlation		
	Sig. (2-tailed)		.000
	N	120	120
MAP MA 2013- 2014	Pearson	.660**	1
	Correlation		
	Sig. (2-tailed)	.000	
	N	120	120

Note. Statistical significance is noted at $p \leq 0.05$.

Research Question 4

What is the relationship between teacher-assigned traditional grades and student achievement scores on the Missouri Assessment Program (MAP) grade-level Mathematics (MA) assessment in one rural elementary school?

H_0 : There is no relationship between teacher-assigned traditional grades and student achievement scores on the Missouri Assessment Program (MAP) grade-level Mathematics (MA) assessment in one rural elementary school.

A frequency analysis of the teacher-assigned traditional grades in MA for 2012-2013 revealed of the 120 students from the sample, 40.8% scored a letter grade of A, the equivalent of *advanced* while 16.7% performed *advanced* on the MAP grade level MA exam. This revealed a 24.1% difference between the two metrics.

To examine research question three, a Pearson product-moment coefficient of correlation (Pearson r) was calculated to assess the relationship between traditional grades and MAP MA scores. The Pearson r determines the strength of a straight linear fit closest to $r=1.0$ (Fraenkel et al., 2015). There was a positive correlation between the two variables [$r = 0.534, n = 120$] which was statistically significant [$p = 0.000$]. The resulting data are presented in Table 4.

Table 4

Correlation of MAP MA Scores to Traditional Grades

		Traditional MA 2012-2013	MAP MA 2012-2013
Traditional MA 2012-2013	Pearson Correlation	1	.534**
	Sig. (2-tailed)		.000
	<i>N</i>	120	120
MAP MA 2012-2013	Pearson Correlation	.534**	1
	Sig. (2-tailed)	.000	
	<i>N</i>	120	120

Note. Statistical significance is noted at $p \leq 0.05$.

Summary

Chapter Four began with the descriptive data collected for this study and the criteria used to select the sampled. The results of the statistical analysis in response to the four research questions for this study were presented. The results of the Pearson product-moment correlation coefficient (denoted by r) and tests of statistical significance (denoted by p) showed strong positive and significant relationships between teacher-assigned standards-based grades and student achievement in the areas of ELA and MA. Chapter Five includes a review of the implications of the findings from the statistical analyses and outlines recommendations for future research and practice.

Chapter Five: Summary and Conclusions

Nationally, standards-based instruction is at the forefront of reform, with the implementation of Common Core State Standards (CCSS) in some states (Council of Chief State School Officers, 2015). The CCSS are providing states with a clearer picture of how standards can provide a focus for learning that allows students to build on previously learned skills, while continually working towards a deeper level of understanding (Council of Chief State School Officers, 2015). The shift of grading practices, as well as standardized instructional practices, focuses student learning in the form of standards (MODESE, 2014).

The goal of standards-based reporting practice is to minimize subjectivity in grading, therefore providing an accurate picture of student learning and progress unaffected by various extrinsic factors such as behavior, participation, and/or parental involvement (O'Connor, 2011). According to Oliver (2011), "Grading by standards requires the teacher to know where their students are on the learning continuum and thus, be able to determine how to address individual student needs" (p. 3). A new paradigm of how to record student learning may be a major adjustment for teachers when moving from the traditional grading approach to the standards-based grading approach (Oliver, 2011).

Marzano (2010) noted the use of grade book columns, representing standards rather than assignments, tests, projects, and activities, is a major shift for classroom teachers. Teachers who transition to the standards-based grading approach use a variety of assessment tools to determine if students have mastered a specific standard (Marzano, 2010). Marzano (2010) added, "Traditional assessment methods do not need to be set

aside if they are the most valid measure of the standards and essential understandings being addressed” (p. 4).

Smith (2012) asserted, “When grading and achievement standards are clearly defined, school curricula are often re-evaluated and revised” (p. 2). The needs of students from different levels of the learning continuum are addressed, and teachers may more clearly communicate areas of deficiencies, progress, and achievements with students’ families (Smith, 2012). The grade-level prototype is useful for managing classes, although it has consequences for students who do not fit the specific criteria of this model.

Naiditch (2010) noted, “Students whose learning outpaces the standard sequence may be advanced more quickly through the grades, but they are just as likely to find that the system limits their learning opportunities” (p. 1). Also noted by Smith (2012), parents often comment on the similarities of standards-based grading in relation to work place evaluations of employees. This type of teacher evaluation greatly enhances the ability to prepare students for the real world outside the classroom.

Traditional grading practices often include factors which do not accurately reflect students’ mastery of specific standards (Goff, 2015). Often, traditional grading can be exaggerated by effort, homework, or participation and has little focus on the value of student success (Goff, 2015). Goff (2015) highlighted traditional gradebooks can distort a student’s performance. Traditional gradebooks make it difficult to pinpoint individual skills and standards a student needs to work toward as grades are often times lumped together into one score per assessment (Goff, 2015).

Findings

To more closely examine the impact transition from traditional to standards-based grades had on one rural elementary school, the study involved examination of the following research questions to determine how traditional teacher-assigned grades statistically correlate to student performance on the Missouri Assessment Program (MAP) versus how standards-based teacher assigned grades statistically correlate to student performance on the MAP.

Research Question 1

What is the relationship between teacher-assigned standards-based grades and student achievement scores on the Missouri Assessment Program (MAP) grade-level English Language Arts (ELA) assessment in one rural elementary school?

H₁₀: There is no relationship between teacher-assigned standards-based grades and student achievement scores on the Missouri Assessment Program (MAP) grade-level English Language Arts (ELA) assessment in one rural elementary school.

To more closely examine research question one, a Pearson product-moment coefficient of correlation (Pearson r) was calculated to assess the relationship between standards-based grades and MAP ELA scores. There was a strong positive correlation between the two variables [$r = 0.717, n = 120$] which was statistically significant [$p = 0.000$]. For this reason, the null hypothesis *H₁₀* was rejected.

This finding supports the belief described in Chapter Two that standards-based grading holds the greatest hope for significantly improving student achievement (Scherer, 2001).

Research Question 2

What is the relationship between teacher-assigned traditional grades and student achievement scores on the Missouri Assessment Program (MAP) grade-level English Language Arts (ELA) assessment in one rural elementary school?

H2₀: There is no relationship between teacher-assigned traditional grades and student achievement scores on the Missouri Assessment Program (MAP) grade-level English Language Arts (ELA) assessment in one rural elementary school.

To examine this question, a frequency analysis of teacher-assigned traditional grades in ELA for 2012-2013 was conducted, which revealed of the 120 students from the sample, 39.2% scored a letter grade of A, the equivalent of *advanced*, while 20% performed *advanced* on the MAP grade-level ELA exam. This revealed a 19.2% difference between the two metrics.

To examine research question two, a Pearson product-moment coefficient of correlation (Pearson r) was calculated to assess the relationship between traditional grades and MAP ELA scores. The Pearson r determines the strength of a straight linear fit closest to $r=1.0$ (Fraenkel et al., 2015). There was a positive correlation between the two variables [$r = 0.545$, $n = 120$] which was statistically significant [$p = 0.000$]. For this reason, the null hypothesis *H2₀* was rejected.

The Pearson correlation coefficient, r , ranges in value from +1 to -1, and a value of 0 indicates there is no association between the two variables (Fraenkel et al., 2015). Fraenkel et al. (2015) asserted, “Higher values, as with the other correlation coefficients, indicate higher degrees of relationship” (p. 208). The standards-based teacher-assigned grades for ELA, $r = 0.717$, yielded a higher degree of relationship to student performance

on the MAP as compared to the traditional teacher-assigned grades where $r = 0.545$. With statistical significance noted at $p \leq 0.05$, the significance of $p = 0.00$ yielded a statistical significance in the correlation between these two variables.

A closer examination of the frequency analysis showed discrepancies as well. There was a 19.2% gap between student performance on the MAP ELA grade-level assessment and teacher-assigned traditional grades, while only a 13.3% gap existed between student performance on the MAP ELA grade-level assessment and teacher-assigned standards-based grades. This 5.9% difference showed standards-based grades as a more reliable determinant for student MAP performance in ELA with a more positive linear relationship between the variables of standards-based grades and student MAP performance.

Research Question 3

What is the relationship between teacher-assigned standards-based grades and student achievement scores on the Missouri Assessment Program (MAP) grade-level Mathematics (MA) assessment in one rural elementary school?

H3₀: There is no relationship between teacher-assigned standards-based grades and student achievement scores on the Missouri Assessment Program (MAP) grade-level Mathematics (MA) assessment in one rural elementary school.

A frequency analysis of teacher-assigned standards-based grades in MA for 2013-2014 revealed of the 120 students from the sample, 20.8% scored a four, the equivalent of *advanced* while 10.8% performed *advanced* on the MAP grade-level ELA exam. This revealed a 10.0% difference between the two metrics.

To more closely examine research question three, a Pearson product-moment coefficient of correlation (Pearson r) was calculated to assess the relationship between standards-based grades and MAP MA scores. The Pearson r determines the strength of a straight linear fit closest to $r = 1.0$ (Fraenkel et al., 2015). There was a strong positive correlation between the two variables [$r = 0.660$, $n = 120$], which was statistically significant [$p = 0.000$]. For this reason, the null hypothesis $H3_0$ was rejected.

Jitendra, Dupuis, and Zaslofsky (2014) noted that to provide an efficient progress-monitoring system for student accountability, educators must provide meaningful assessment feedback which concurrently and reliably predicts student growth. The strong positive correlation from the results found in this research demonstrates the standards-based metric as a meaningful measure of student growth and mastery.

Research Question 4

What is the relationship between teacher-assigned traditional grades and student achievement scores on the Missouri Assessment Program (MAP) grade-level Mathematics (MA) assessment in one rural elementary school?

$H4_0$: There is no relationship between teacher-assigned traditional grades and student achievement scores on the Missouri Assessment Program (MAP) grade-level Mathematics (MA) assessment in one rural elementary school.

A frequency analysis of teacher-assigned traditional grades in MA for 2012-2013 revealed of the 120 students from the sample, 40.8% scored a letter grade of A, the equivalent of *advanced*, while 16.7% performed *advanced* on the MAP grade level MA exam. This revealed a 24.1% difference between the two metrics.

To examine research question four, a Pearson product-moment coefficient of correlation (Pearson r) was calculated to assess the relationship between traditional grades and MAP MA scores. The Pearson r determines the strength of a straight linear fit closest to $r=1.0$ (Fraenkel et al., 2015). There was a positive correlation between the two variables [$r = 0.534$, $n = 120$] which was statistically significant [$p = 0.000$]. For this reason, the null hypothesis H_0 was rejected.

The standards-based teacher-assigned grades for MA, $r = 0.660$, yielded a higher degree of relationship to student performance on the MAP as compared to the traditional teacher-assigned grades where $r = 0.534$. With statistical significance noted at $p \leq 0.05$, the significance of $p = 0.00$ yielded a statistical significance in the correlation between these two variables.

A closer examination of the frequency analysis showed discrepancies as well. There was a 24.1% gap between student performance on the MAP MA grade-level assessment and teacher-assigned traditional grades, while only a 10.0% gap existed between student performance on the MAP MA grade level assessment and teacher-assigned standards-based grades. This 14.1% difference showed standards-based grades as a more reliable determinant for student MAP performance in MA, with a more positive linear relationship between the variables of standards-based grades and student MAP performance.

Implications for Practice

The results of the study show further examination of school grading practices is necessary. The study provides significant information about the relationship between teacher-assigned traditional grades and teacher-assigned standards-based grades and

student achievement. While both teacher-assigned traditional and standards-based grades showed a correlation to MAP performance, the Pearson r for standards-based grade reporting assumed a more positive linear or straight-line relationship among variables (Fraenkel et al., 2015).

However, both standards-based teacher-assigned grades and traditional teacher-assigned grades showed gaps between gradebook measurement of student learning and student learning as gauged by the MAP grade-level assessments. Jitendra et al. (2014) added, “Unlike oral reading fluency which is considered a good indicator of students’ reading problems (decoding and comprehension), a measure of computational fluency in mathematics is not sufficient to assess a student’s overall mathematics competence” (p. 242). In essence, the static measurement of a yearly achievement test may not most accurately measure overall student understanding of a given content area (Jitendra et al., 2014).

As school districts, school administrators, and other educational leaders work to improve student achievement, the need for quality assessment and accurate grading practice is greater than ever. As school leaders strive to maximize the positive impact of resources, standards-aligned assessments may be of great benefit to school and system improvement plans and may more precisely inform significant decisions. The results of this study, indicating the clear benefit of reporting on student learning in terms of standards, will be made available to stakeholders within School District A and will be available to inform district policy to determine the expansion of standards-based grade cards in the middle school in School District A.

Recommendations for Future Research

This study provided a good indication the practice of standards-based grading warrants further research and continued study as a valuable system for reporting on student learning. Additional research may include evaluation of a larger sample population and include students of various grade levels, students from assorted school districts and/or states, and students who represent different demographic backgrounds than those found in School District A.

Future researchers may reevaluate and revisit the effectiveness of the relationship between teacher-assigned standards-based grades and student achievement. As teacher-assigned standards-based grading had been in place for only one school year, future researchers should examine teacher-assigned scores and relationships after at least five years of implementation.

Summary

The purpose of this quantitative research study was to determine the relationship between teacher-assigned traditional grades and teacher-assigned standards-based grade cards and student achievement. Specifically, the study examined ELA and MA teacher-assigned grades and ELA and MA student academic achievement.

The participants of this study were elementary students from School District A. The study was conducted using a census sampling of 120 elementary students from a population of 120 from Elementary School A within School District A. Four research questions addressed the relationships between teacher-assigned traditional grades and teacher-assigned standards-based grades and student achievement in the areas of ELA and MA. Likewise, there were four null hypotheses negating a significant relationship

between teacher-assigned traditional grades and teacher-assigned standards-based grades and student achievement, in the areas of ELA and MA. All four null hypotheses were rejected.

The study revealed teacher-assigned standards-based grades more accurately informed student performance on the Missouri Assessment Program. It was clear there were significant relationships in these scores which rely on ELA and MA teacher-assigned standards-based grading and student achievement.

In summary, scores on standards-based report cards provide a more accurate portrayal of student learning as shown by student success on high-stakes accountability assessments. While it may be difficult to remove subjectivity in grading and reporting, it is clear standards-based grading provides an accurate and consistent measure of student learning. Directing focus on standards-based assessment and grading practice, teachers may improve student learning by providing a clear depiction of student progress necessary to increase student achievement.

Appendix A

LINDENWOOD

LINDENWOOD UNIVERSITY ST. CHARLES, MISSOURI

DATE: January 14, 2015

TO: Ashley Hamby
FROM: Lindenwood University Institutional Review Board

STUDY TITLE: [693159-1] An Examination of the Relationship Between Teacher Assigned Standards-Based Grades and Teacher Assigned Traditional Grades and Student Achievement

IRB REFERENCE #:
SUBMISSION TYPE: New Project

ACTION: APPROVED
APPROVAL DATE: January 14, 2015
EXPIRATION DATE: January 14, 2016
REVIEW TYPE: Expedited Review

Thank you for your submission of New Project materials for this research project. Lindenwood University Institutional Review Board has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a study design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

This submission has received Expedited Review based on the applicable federal regulation.

Please remember that informed consent is a process beginning with a description of the study and insurance of participant understanding followed by a signed consent form. Informed consent must continue throughout the study via a dialogue between the researcher and research participant. Federal regulations require each participant receive a copy of the signed consent document.

Please note that any revision to previously approved materials must be approved by this office prior to initiation. Please use the appropriate revision forms for this procedure.

All SERIOUS and UNEXPECTED adverse events must be reported to this office. Please use the appropriate adverse event forms for this procedure. All FDA and sponsor reporting requirements should also be followed.

All NON-COMPLIANCE issues or COMPLAINTS regarding this project must be reported promptly to the IRB.

This project has been determined to be a project. Based on the risks, this project requires continuing review by this committee on an annual basis. Please use the completion/amendment form for this procedure. Your documentation for continuing review must be received with sufficient time for review and continued approval before the expiration date of January 14, 2016.

Please note that all research records must be retained for a minimum of three years.

If you have any questions, please contact Robyne Elder at (314) 566-4884 or relder@lindenwood.edu. Please include your study title and reference number in all correspondence with this office.

If you have any questions, please send them to IRB@lindenwood.edu. Please include your project title and reference number in all correspondence with this committee.

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within Lindenwood University Institutional Review Board's records.

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Vita

Ashley Louise Tyree-Hamby was born in West Plains, Missouri. After completing her schoolwork at West Plains High School in 2004, Ashley attended Missouri State University in West Plains, Missouri, and Springfield, Missouri. During Ashley's coursework, she completed courses at Arkansas State University in Mountain Home, Arkansas, and Ozarks Technical College in Springfield, Missouri. She received her Bachelor of Science in Elementary Education from Missouri State University in May 2010 and was hired by West Plains R-VII in August 2010 as a fifth-grade science teacher at West Plains Middle School. Beginning December 2010, she attended graduate school at William Woods University in Fulton, Missouri. In December 2012, Ashley graduated from William Woods University with a Masters in Educational Administration.