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Current Grading Practices For Indiana Elementary Grades K-5 And The Impact On Communication, Assessment, And Student Mindset

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CURRENT GRADING PRACTICES FOR INDIANA ELEMENTARY GRADES K-5 AND THE IMPACT ON COMMUNICATION, ASSESSMENT, AND STUDENT MINDSET

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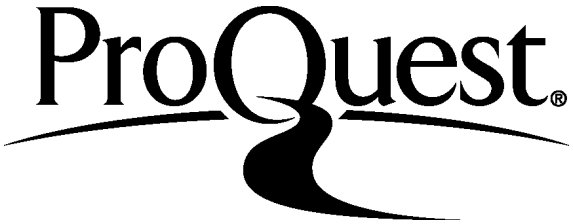

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ABSTRACT

This study involved elementary teachers in Indiana who were actively teaching during the spring of 2015. The purpose of this study was to determine whether or not there is a significant difference between the perceptions of teachers using traditional report cards and those who use standards-based report cards in the areas of assessment of students, communication from the viewpoint of teachers and from the viewpoint of parents, and mindset of students. Results were viewed through the lens of students of affluence (< 35% free/reduced lunch) and students of poverty (≥ 50% free/reduced lunch).

Standards-based responses in the areas of assessment, communication from the viewpoint of teachers and parents, and student mindset were statistically significant factors for students of poverty; assessment was also significant for students of affluence. Traditional report cards offered statistical significance only for students of affluence in the area of communication from the teacher viewpoint. Communication from the parent viewpoint (reported by teachers) and student mindset were not statistically significant factors for students of affluence in either reporting system, meaning teachers of students of affluence did not find traditional report cards or standards-based report cards as more important.

Implications of these findings are of particular importance to teachers of students of poverty, as the use of standards-based report cards are significant when teachers look at student assessment, teacher communication, parent communication, and student mindset. Although traditional report cards actually showed significance in one area (teacher communication) for one

student group (students of affluence), more consideration should be given to the use of standards-based report cards for all students.

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DEDICATION

To my grandchildren

Lily, Ruby, Nina, Riley, Wyatt, Addison, and ??

May God guide you as you reach for your dreams.

"In Him we live and move and have our being" Acts 17:28a

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CHAPTER 1

INTRODUCTION

When asked how a child is doing in school, the answer often includes a reference to the letter grades the child receives. Letter grades have become synonymous with success or lack of success in school to students, parents, teachers, and "outside stakeholders" such as colleges, grant/ award recognitions, and employers. For the last generation of students, standardized test scores have become another mandatory indicator of success for students, parents, and teachers. No longer is the grade on the report card the sole assessment to summatively report student learning. The mission of schools is changing from ranking students by averaging their letter grades to ensuring that all students learn to specified standards (Stiggins, 2005). Adding the layer of standardized measurement to the tradition of grading by the teacher has broadened the discussion of how to best inform all stakeholders of the academic progress of students in consistent and meaningful terms (O'Connor, 2009).

Statement of the Problem

Student achievement is reported to parents most often by letter grades on assignments that culminate in a summative grade, typically four or six times per year. The use of letter grades to summarize student learning is a commonly accepted practice across generations, countries, and student age levels. In actuality, the use of summative letter grades has only been around for just over 100 years (Goodwin, 2011). Debate about using one summative letter to indicate

student achievement has been ongoing since the practice was widely accepted as the means to report student achievement. Questions were raised about the use of letter grades as well as the use of percentages to justify the grades given (Finkelstein, 1913).

The need for more schools to educate children grew as the population of the United States rose. With the number of students increasing, teachers needed a more practical way to share student progress with parents, colleges, and businesses (Stiggins, 2006). The solution to this growth dilemma was to find a way to differentiate the degree to which students were learning (O'Connor, 2010). Student learning was given a fixed length of time, which was one year, and was noted by assigning grade levels (Answers, 2002; Stiggins, 2005). Letter grades often resulted in different meanings, and often incorporated academic assessment, effort, behavior, attendance, and motivation as factors of grading (Brookhart, 2011). Kohn (2011) was one of many who interpreted grades as a less than effective means of conveying what students are actually learning when he stated, "Collecting information doesn't require tests, and sharing that information doesn't require grades" (p. 28).

Letter grades were created as a means of measuring student achievement. O'Connor (2010) noted that the primary purpose of grading should be to communicate student achievement of learning goals with parents and students. However, teachers often assess non-academic factors such as attendance, behavior, participation, and timeliness of homework, along with actual achievement, when determining what grade to give (Marzano & Heflebower, 2011). Educators have the responsibility of communicating student achievement to parents, whether using traditional report cards or standards-based report cards. However, most educators have not been well trained on how to accurately report student performance to parents (Cizek, 1996). Often educators report grades based on their own experiences as students (Guskey, 2006).

Educators must debate and discuss the purpose of assessments they are reporting to stakeholders, whether parents, colleges, or employers. No single assessment can meet the information needs of all stakeholders (Stiggins, 2006).

In the 1960s, standardized tests were introduced as the means of comparing schools across districts on a yearly basis. Since then, standardized tests have become just one instrument used to compare achievement of students, by measuring scores on identified academic standards across districts, states, and nations (Stiggins, 2006). States developed their own standards for students to meet. More recently, most states have worked collaboratively to develop the Common Core State Standards Initiative, or CCSS.

> Every state also had its own definition of proficiency, which is the level at which a student is determined to be sufficiently educated at each grade level and upon graduation. This lack of standardization was one reason why states decided to develop the Common Core State Standards in 2009. (CCSS, 2014, para. 2)

The CCSS have been built on a nation-wide level, combining efforts of educators, parents, and students. The overarching goal of the CCSS has been to develop rigorous and unified goals for student achievement and prepare students for college and a modern workforce. States have either adopted nationally recognized Common Core State Standards (CCSS), or have adopted their own version of the CCSS. Indiana has developed their own version, the College and Career Readiness Standards (CCRS).

The use of standards for setting and measuring student achievement has become an accepted practice across all states, whether state standards or CCSS. Standards are written so teachers across various genrés are aware of the skills and knowledge students should acquire through instruction (Guskey & Jung, 2013). However, there are concerns with what the

standardized test is actually measuring. "The problem with current standardized tests is that the standards being tested are often separate from those reflected in the curriculum" (Simmons, 2010, p. 1). Not only may standardized tests measure different standards than classroom curriculum, they also are not seen as reliable indicators of achievement. "Test scores, which can vary from year to year due to a multitude of variables, are unreliable indicators which can be affected by many predictable and random factors" (McGrath, 2006, pp. 7-8). Similarly, Popham stated that since the aim of standardized testing is to create a separation of the achievement of students, standardized tests should not be used to evaluate the learning of students (Simmons, 2010).

O'Connor (2009) and Guskey and Jung (2013) proposed there are two components to consider when reporting student achievement using standards—content standards and performance standards. Content standards are known as learning targets or goals, which state the expectations for student learning. Performance standards indicate how well the student performs those targets or goals by offering benchmarks or indicators to educators, students, and parents. The first state to actually develop a statewide standards-based report card was Kentucky. Teachers in Kentucky are required to base grades on explicit criteria articulated in the learning standards. Likewise, teachers are also compelled to distinguish product, process, and progress criteria (Guskey, Swan, & Jung, 2011). O'Connor (2009) identified product as the culmination of learning, progress as learning gain or improvement, and process as a combination of extraneous factors. Notably, process criteria, such as effort, timeliness, and responsibility, are seen as external elements of grading that are external to the actual achievement.

Dweck (2006) posited there are also internal elements which impact student achievement. Dweck saw the mindset of a student as the major factor in whether people achieve expertise.

"There are two meanings to ability not one: a fixed ability that needs to be proven OR a changeable ability that can be developed through learning" (Dweck, 2006, p. 15). The *fixed* mindset is the belief that one's qualities are carved in stone and therefore, an urgency is created to prove oneself over and over; a person has a certain amount of intelligence, certain personality, certain moral character that one must prove. The other viewpoint is that of the growth mindset in which basic qualities are things one can cultivate through effort. According to the growth mindset, although people may differ in multiple ways in their initial talents and aptitudes, interests or temperaments, everyone can change and growth through application and experience (Dweck, 2006).

How do these two mindsets show up in the learning process? Children with the growth mindset want to make sure they succeed; success is about stretching themselves. Students with the growth mindset tend to seize the chance to learn material that is presented to them. Students with the fixed mindset do not want to expose their deficiencies. Fixed mindset students would rather *feel* smart in the short run (now). In studies conducted by Dweck (2006), students were willing to put their college careers at risk rather than learn new material. Dweck saw this as how the fixed mindset makes people into non-learners. There may be external factors that impact learning; however, there are also internal factors that may impact the learning of students, according to research.

Purpose of the Study

The purpose of this study was to determine whether or not there is a significant difference between the perceptions of teachers using traditional report cards and those using standards-based report cards in the areas of assessment, communication, and mindset of students. "In education, grades are the symbols, words, or numerals that teachers assign to evidence on student

learning to signify different levels of achievement" (Guskey & Jung, 2013, p. 64). The evidence teachers collect to support and assess learning is part of the professional judgment that teachers exercise. Examples of student work, both process and product, are used by teachers to determine the achievement marks given to the student. This use of product and process becomes a defining area separating traditional and standards-based grading practices.

The debate is ongoing regarding the best way to communicate the ongoing growth in which students are able to demonstrate the level of skills and knowledge they have obtained. Traditional report cards often offer a single summary grade for overall skills such as reading, math, science, social studies which is sometimes referred to as an "omnibus grade" (Marzano & Heflebower, 2011, para. 3). When teachers base student grades on specific learning standards, the meaning of the grade changes from a general overall assessment of learning, to a much more detailed description of student performance on a discrete set of skills (Jung & Guskey, 2007). For this reason, some school districts have moved from a traditional report card to a standards-based report card. The purpose of standards-based grading is to align grading practices with content standards by measuring and reporting a student's proficiency (Oliver, 2011). Standards-based cards may list specific standards that vary from one grading period to another, or they may offer narratives along broader strands or domains of standards (Guskey & Jung, 2013). Either way, standards-based cards seek to remedy the omnibus grade by providing more clarity regarding student achievement. The purpose of this study was to determine whether there are significant differences between reporting systems of traditional report cards and standards-based report cards in the areas of assessment and communication. Beyond this information, what role does the mindset of students play in these reporting systems? Does the socioeconomic status (SES) of students affect their mindset identified by teachers?

Research Questions

This study addressed the following question and subquestions:

Is there a difference between the perceptions of teachers using traditional report cards and those using standards-based report cards in the areas of assessment, communication, and mindset of students?

Q1a. Is there a significant difference on assessment composite scores based on reporting systems within high-poverty schools?

Q1b. Is there a significant difference on assessment composite scores based on reporting systems within low-poverty schools?

Q2a. Is there a significant difference on communication composite scores based on reporting systems within high-poverty schools?

Q2b. Is there a significant difference on communication composite scores based on reporting systems within low-poverty schools?

Q3a. Is there a significant difference on mindset composite scores based on reporting systems within high-poverty schools?

Q3b. Is there a significant difference on mindset composite scores based on reporting systems within low-poverty schools?

Null Hypotheses

The following represented the null hypotheses:

$H_0$1a. There is no significant difference on assessment composite scores based on reporting systems within high-poverty schools.

$H_0$1b: There is no significant difference on assessment composite scores based on reporting systems within low-poverty schools.

$H_0$2a: There is no significant difference on communication composite scores based on reporting systems within high-poverty schools.

$H_0$2b: There is no significant difference on communication composite scores based on reporting systems within low-poverty schools.

$H_0$3a: There is no significant difference on mindset composite scores based on reporting systems within high-poverty schools.

$H_0$3b: There is no significant difference on mindset composite scores based on reporting systems within low-poverty schools.

Delimitations

A delimiting factor of this study included the number of Indiana schools that participated in the study. An additional delimiting factor of this study was the decision to use information only from teachers of students in Grades K-5.

Limitations

1. The study was limited to the honesty of teachers self-reporting when given a questionnaire.
2. The study was limited to factors teachers use when computing grades.
3. The study was limited to the number of respondents to the survey.
4. The study was limited to the prior environmental and educational experiences of students.
5. The study was limited to the respondents' understanding of standards-based assessment.
6. The study was limited to teachers' abilities to respond because of a corporation's Internet filtering system.

Definitions

For the purposes of this study, certain definitions have been used in research cited in this study and are summarized below:

Academic achievement refers to knowledge in a content area, such as reading and math, the student can demonstrate to the teacher.

Achievement refers to "marks students receive for learning activities" (O'Connor, 2009, p. 241); "demonstration of the knowledge and skill components of the standards" (or learning goals;" (O'Connor, 2009, p. 89); performance of standards "how good is good enough" (O'Connor, 2009, p. 8); "the act of achieving or performing; an obtaining by exertion; successful performance" (O'Connor, 2011, p. 74).

Assessment refers to "measure students' mastery of standards" (Duncan & Murane, 2014, p. 51).

Correlation refers to analysis of data to look at relationships between variables, rather than cause and effect.

Experienced standards-based refers to those teachers using report cards based on standards for three years or more.

Formative assessment(s) refers to "specific achievement targets selected by teachers that enable students to build toward standards" (Stiggins, 2006, p. 35);

> assessments that we conduct throughout teaching and learning to diagnose student needs, plan our next steps in instruction, provide students with feedback they can use to improve the quality of their work and help students see and feel in control of their journey to success. (Stiggins, 2006, p. 33)

Grade refers to "the number or letter reported at the end of a period of time as a summary statement of student performance" (O'Connor, 2009, p. 2).

Growth refers to "the process of growing: increase in size, number, frequency, strength, etc." (O'Connor, 2011, p. 74).

Learning refers to assessment at completion of significant skill (O'Connor, 2009); "expectations, outcomes, learning results or learning goals" (O'Connor, 2009, p. 8); "the "what" or content of standards" (O'Connor, 2009, p. 9);

> grades are artifacts of learning; as such, they should reflect student achievement only; not just doing the work, but the quality of work; developmental and will grow with time and repeated opportunities; the most current information that is used to summarize achievement." (O'Connor, 2011, p. 72)

Marks refers to "the number, letter, or words placed on any single student assessment" (test, performance task, etc.; O'Connor, 2009, p. 2).

Mindset refers to Dweck's (2006) two meanings to ability: "a *fixed* ability that needs to be proven and a changeable *growth* ability that can be developed through learning; one's beliefs about oneself and the nature of one's abilities" (Pink, 2009, p. 118).

Newly implemented standards based refers to teachers using report cards that are based on standards for less than three years, for the purpose of this study; teachers in Indiana Mentor and Assessment Program (IMAP) or having just finished a teacher induction program.

Progress refers to "movement, as toward a goal; advance" (O'Connor, 2011, p. 74).

Standards refers to "the particular knowledge students are expected to acquire as a result of their involvement in instructional activities (content) and what we want students to be able to do with what they learn (Guskey & Jung, 2013, p. 98); "expectations, outcomes, learning results

or learning goals" (O'Connor, 2009, p. 8); "the "what" or content of standards" (O'Connor, 2009, p. 9).

Summative assessment(s) refers to "achievement standards for which schools, teachers, and students are held accountable" (Stiggins, 2006, p. 35); "assessments that happen after learning is supposed to have occurred to determine if it did" (Stiggins, 2006, p. 31); "designed to measure achievement, and 'are used to make statements of student learning status at a point in time to those outside the classroom" (O'Connor, 2011, p. 5).

Significance of the Study

Educators are being asked to accurately communicate student progress. Past practice has been to communicate progress with parents by grading assignments and providing a summary of grades on the report card, culminating with an average of all of the grades. This practice is now being questioned as computing grades by averaging is shifting to assessment of students according to standards. The movement to standards-based assessments both in the form of report cards and standardized-test results is a challenge that educators must become prepared to make.

School leaders need to understand the purpose for the assessments, whether grades or standardized tests (Reeves, 2011). "District and school policies need to be in place so that teachers know what procedures to follow in their classrooms" (O'Connor, 2009, p. 216). Development of grading policies provides guidance for teachers and consistency throughout the school district. Such policies can also provide the opportunity for discussions so that all groups can interpret the use of and meaning of grades with similar understandings (Guskey & Jung, 2013).

In order to implement changes to the grading policy, leaders must believe and be willing to implement action-oriented change. Reeves (2011) noted there are four elements of this

change model "explicit vision, specification of behavior, assessment and feedback, and continuous refinement" (p. 108). The leader must create a compelling vision wherein there are fewer student failures and more student successes. Next, the leader must create specific behavioral expectations for implementing the change. Then the leader must assess the implementation levels of the practice. Finally, the leader must continually refine and improve the changes. "After assessing the degree of implementation of the change and the impact of those changes on student results, the leader must refine and improve the changes on a continuous basis" (Reeves, 2001, p. 111).

Summary

"To succeed in tearing down old traditions, you must have new traditions to take their place" (Guskey, 2011, para. 2). Grading by averaging scores has been in question since shortly after its inception in the early 1900s. The use of grades to rank students is no longer the prevalent necessity in modern society. Research has shown that effective assessment and effective communication allows students to take charge of their own learning and at the same time provides accurate information to stakeholders. Research is also tasked with studying elements that impact student learning, whether those elements are internal or external. The challenge to education and educators is to research the best practices in providing all of this information in ways that are understandable to those involved.

Chapter 1 discussed the purpose and significance of the study, as well as set forth the hypotheses. Chapter 2 discusses the history and research behind grading and report cards, as well as the impact of communication, assessments and mindsets upon grades and report cards. Chapter 3 presents the methodology of the study. Following the survey, Chapter 4 discusses the

results of the study. Chapter 5 uses the research and the results of the study to discuss the next steps with grading and reporting student achievement.

CHAPTER 2

REVIEW OF LITERATURE

The expectation of attendance at a public school has been to further the academic achievement of the student (Oliver, 2012; Stiggins, 2006). As student enrollment in public schools rose and as opportunities for education became more prevalent, educators needed to streamline the narrative reports that were given to stakeholders (Durm, 1993; Stiggins, 2005). The solution to the dilemma resulted in the evolution of letter grades (Goodwin, 2011). The process of using letter grades to demonstrate student progress and achievement was not without controversy from the inception to the present day (Kohn, 2011; O'Connor & Wormelli, 2011; Otto, 1973). Educators continue to attempt to merge reporting of student achievement to all stakeholders with assessment of student progress and to do so with accountability and accuracy (Brookhart, 2011; Marzano & Heflebower, 2011). The purpose of this study sought to look at factors that impact grading from both a historical and a present day perspective, as well as how the meanings of those grades are communicated. Further study in the area of grading and assessment, including communication of student achievement, was recommended by Guskey (2011) and Oliver (2011).

Historical Practices of Grading

For hundreds of years, grading was given to parents and stakeholders as a narrative report or verbal assessment. Narrative reports, listing skills, and concepts each student mastered were

used to separate student performance at all levels of learning (O'Connor, 2010). Eliot (1923) noted that in the early years, Harvard listed students according to the social position of their families and Yale used descriptive adjectives. William and Mary classified students in 1817 with one of four notations: "1) first in class, 2) orderly, correct and attentive, 3) they have made very little improvement, 4) they have learnt little or nothing" (Durm, 1993, p. 295). In the mid-19th century, Otto (1973) noted that colleges and universities began moving from narrative reports and started using some form of a letter grading system. "In the 1880s, Harvard adopted a new approach to evaluating student work . . . the letter grade" (Goodwin, 2011, p. 80). Letter grades were not necessarily the A to F grades we have today, but rather letter grades or number symbols were used to summarize student achievement in place of the longer, more detailed narrative reports. "This reductionist movement began in universities, and then moved to K-12 schools, especially to high schools, in response to a growing student population" (O'Connor, 2010, p. 38).

As student numbers increased, the task of narrative grades became problematic. Between 1870 and 1910 the number of high schools increased from 500 to 10,000 (Answers, 2002). As people migrated into the cities and labor in factories grew, the value of education for children became more important to parents. A compulsory attendance law also created an increase in numbers of students in school (Answers, 2002). Although the use of percentages for grades was common by 1910, as early as 1912, two Wisconsin researchers, Daniel Starch and Edward Charles Elliot, were questioning the reliability of percentages in determining grades (Reedy, 1995; O'Connor, 2010). Finkelstein (1913) stated, "School administrators have been using with confidence an absolutely uncalibrated instrument" (p. 1).

Grading then moved from percentages to a form of scale, usually A to F or Excellent/Good/Average/Poor/Failing, using three to five categories (O'Connor, 2009). The use of a scale report was followed in the 1930s by a normal probability, or bell-shaped curve, which was thought to be both fair and equitable since innate intelligence and school achievement were thought to be directly related (O'Connor, 2010; Answers, 2002). School leaders and educators seemed to move into one of three thought patterns.

"As the debate over grading and reporting intensified, a number of schools abolished formal grades altogether (Chapman & Alsbaugh, 1925) and returned to using verbal descriptions of student achievement. Others advocated pass-fail systems that distinguished only between acceptable and failing work (Good, 1937). "Still others advocated a 'mastery approach:' Once students have mastered a skill or content, they move to other areas of study" (as cited in Guskey & Guskey, 1994, p. 18). By the 1950s, there was a great variation in reporting student achievement (O'Connor, 2010).

In the 1960s, the belief was that the way to improve schooling was through the use of standardized testing, expanding from district tests to state, federal, and international testing (Stiggins, 2004). Part of the need for testing was due to increased numbers of "baby boomers" who were heading to college, yet were unprepared for the academic expectations they faced (Goodwin, 2011). With the increasing numbers of students engaged in formal schooling, the present mission of schools is to ensure that all students meet increasingly rigorous academic standards (Stiggins, 2006). Standardized tests have been used for 60 years despite the failure of such testing to reduce achievement gap scores (Stiggins & Chappuis, 2005).

"Since the introduction of percentage grades in public high schools in the early 1900's, grading and grade reporting have recycled more than they have evolved" (Reedy, 1995, p. 47).

Now assessment and grading that allowed a few to succeed must now permit the possibility that all students could succeed at some appropriate level (Stiggins, 2005). In the midst of standardized testing and all students being expected to perform to increasing higher levels, grades remain largely the domain of individual teachers (Cox, 2011).

> The score or grade provides the information by which students decide whether or how they fit into the world of writers, readers, or math problem solvers. Students read the score as evidence of whether success is even within reach for them. (Stiggins, 2004, p. 25)

Present Day Practices of Grading

Questions about grading and grading practices are ongoing. Although grades are still the main avenue for communicating academic performance (Cizek, 1996), what is the purpose of grading? If grades are meant to communicate student performance, how reliable and valid are grades? If grades do not communicate student performance, what do they reflect? With the move by many states to standards, how do grades relate to standards? How do assessments and grades relate to each other? Discussion related to these questions provides many interesting points of thought without definitive answers.

The Purpose of Grading

Grading involves the assignment of symbolic numbers or letters that serve as a summary of evaluations of student work over a period of time (Marzano & Heflebower, 2011; Tomlinson, 2005). Tomlinson (2005) further suggested, "The goal of grading is to provide high quality feedback to parents and students so they can clearly understand and appropriately use the information to support the learning process and encourage student success" (p. 263). Although

grading seems to be straightforward and uncontroversial, terms such as *high quality feedback*, *clearly understand information* and *encourage student success* start the debate on grades.

The responsibility of giving grades is given to teachers or, is the responsibility of earning grades owned by students? Green and Emerson (2007) stated, "Grading is one of the least liked, least understood, and least considered aspects of teaching" (p. 495). Teachers often provide summative reports to students and parents regarding the quality of student work on a daily, weekly, or multi-week basis. Grades reflect the teacher's idea of student achievement and should provide students with information they can use to enhance their performance and learning (Guskey, 2006).

"Traditionally, report cards, especially for secondary schools, have been little more than lists of grades and brief comments about student progress and behavior" (O'Connor, 2009, p. 220). Often, one letter grade must carry many different types of information. Teachers put together a variety of information, including achievement, effort, and behavior, into one letter that summarizes student learning. However, there is a problem with summarizing multiple pieces of information into one letter grade. "In particular, no specific mathematical procedure for combining scores from various sources of evidence is defensible under all conditions" (Guskey & Jung, 2013, p. 65).

Kohn (2011) offered that "collecting information does not require tests, and sharing that information doesn't require grades" (p. 28). For many students and parents, the educational experience becomes synonymous with what grades the student earns or is given, not what the student learns. Quinn (2012) suggested that assignments become a means to an end (grades) and that students become oblivious as to whether or not they are learning and do not understand what they must do to improve their performance. Therefore the question still remains—do teachers

give grades or do students earn them, or is it some combination of both? What one teacher considers when determining what goes into a grade may differ greatly from what another teacher may consider when determining a grade (Guskey, 2006).

Guskey and Jung (2013) offered five questions to help determine the purpose of grading:

1. What do grades mean?
2. What evidence should be considered in determining grades?
3. Who is the primary audience for the information?
4. What is the intended goal of that communication?
5. How should that information be used? (p. 71)

Why is purpose important? "When educators do not agree on the purpose, they often attempt to create policies for grading that address all of these purposes—and usually end up achieving none very well" (Guskey & Jung, 2013, p. 70). They go on to say, "The simple truth is that no approach to grading can serve all of these purposes well. In fact, some of these purposes are actually counter to others" (Guskey & Jung, 2013, p. 70). Guskey and Jung (2013) then summarize the purpose of grading.

> The purpose of grading is to describe how well students have achieved specific learning expectations based on evidence gathered from an assignment, assessment, or other demonstration of learning. Grades are intended to inform parents, students, and others about learning successes and to guide improvements when needed. (p. 71)

O'Connor (2009) summarized one purpose for grading, yet had several guidelines for creating the grades. He stated, "The primary purpose of grades is to communicate meaningful information to students, parents, teachers, potential employers, colleges, and other individuals and institutions concerning the achievement status of students" (O'Connor, 2009, p. 219). He

also stated that letter grades are only a small part of our communication system. O'Connor (2009) believed that a set of grading guidelines are needed in order to avoid the misuse and misinterpretation of grades. O'Connor's (2009) guidelines are

1. Relate grading procedures to learning goals (i.e., standards).
2. Use criterion-referenced performance standards as reference points to determine grades.
3. Limit the valued attributes included in grades to individual achievement.
4. Sample student performance—do not include all scores in grades.
5. Grade in pencil—keep records so they can be updated easily.
6. Crunch numbers carefully—if at all.
7. Use quality assessment(s) and properly recorded evidence of achievement.
8. Discuss and involve students in assessment, including grading, throughout the teaching/learning process. (p. 41)

O'Connor (2009) noted that Guidelines 7 and 8 are used by many teachers in traditional and standards-based systems, and have been in place for many years. Guidelines 1 through 6 relate more to standards-based systems.

Erickson (2011) cited a study of a school in Minnesota whose teachers were adding many extraneous factors such as attendance, behavior, extra credit, and participation along with actual achievement to arrive at a single letter grade. He found the first step in addressing the concerns of parents and teacher surveys was the need to "articulate a clear focus for grading" (Erickson, 2011, p. 66). "Changing our school's grading practices required that we take a fundamental look at one guiding question: What should go into a grade?" (Erickson, 2011, p. 66). The answer they arrived at provided the motivation for their work: "Grades should reflect only what a student

knows and is able to do" (Erickson, 2011, p. 66). Parents and teachers arrived at a decision that not more than 15% of the students' final grades would be from formative assessments, and not less than 85% of the students' final grades would be from summative assessments. Other issues, such as homework, retakes and redos, behavioral infractions, and home-school communication, were also addressed (Erickson, 2011).

Tomlinson (2005) proposed that grading and assessment are not synonymous. Historically, assessments were used to rank order students and to detect differences in student learning (Stiggins, 2007a). Schools have used assessments in the form of quizzes, tests, homework, and letter grades to motivate students to learn. Students were the ones who decided "whether success was within or beyond their reach, whether the learning is worth the required effort, and so whether to try or not" (Stiggins, 2005, p. 325). This worked for society and students when ranking was the purpose of education (Stiggins, 2007a).

The referred assessments are seen as mostly summative assessments or assessments used to arrive at a summation of learning which was often a single letter grade. "Global economic changes, together with the development of standards and our new understandings about learning, are leading to significant changes in the ways children are taught and the ways in which they are assessed" (O'Connor, 2009, p. 12). "The primary purpose of classroom assessment [must now be] to inform learning, not to sort and select or justify a grade" (McTighe & Ferrara, 1995, p. 11). This was a shift to more of a formative assessment. Formative assessment is "a process, strategy, or device used by teachers and students to gather information on students' learning progress in order to identify learning difficulties and guide improvements in instructional activities and student learning" (Guskey & Jung, 2013, p. 26).

Black and Wiliam (1998) studied assessment and showed that a switch to assessment for learning or using assessments to determine learning that needed to take place, could make assessments more powerful learning tools. "Assessment for learning turns day-to-day assessment into a teaching and learning process that enhances (instead of merely monitoring) student learning" (Stiggins, 2007a, p. 24). Black and Wiliam (1998) defined formative assessments as "when comparison of actual and reference levels yield information which is then used to alter the gap" (p. 53). Their research and the work of others have shown that improving formative assessment and using assessment for learning raises the achievement of all students, but also that it has the most significant impact on low achievers (O'Connor, 2011).

Letter grades are a major incentive for some students to learn. "Although many educators debate the idea, extensive evidence shows that grades and other reporting methods are important factors in determining the amount of effort students put forth and how seriously they regard any learning or assessment task" (Guskey & Jung, 2013, p. 69). Students' attitudes about learning and about themselves as learners are of great importance in establishing, maintaining, and developing students' commitment to the learning process.

With teachers in such disarray with the purpose of grading, it is not surprising that students and parents are confused also. Until educators can arrive at an answer they *own*, the question will not be decided and, more unfortunately, not often asked nor debated.

Reliability and Validity of Grades

"The grades teachers and professors assign to students' work and performance have long been identified by those in the measurement community as prime examples of unreliable measurement" (Guskey, 2006, p. 1). Grades are not consistent measures of student learning or achievement due in part to the assessment itself and to the inference needed to move from an

assessment to a grade. The focus of teachers is on promoting learning of students not creating assessments/ grades comparable or consistent measures across students (Brookhart, 2001). As teachers are focusing on the learning of students, they sometimes add in exceptions to the grading process (Gordon & Fay, 2010). Many extraneous factors sometimes interfere with the consistency of assigning a grade to a paper or assigning a grade spanning a period of time, thus contaminating the reliability of grades/assessments.

The validity of grades, or the consistency of grades, is often on shaky ground. "There are two types of threats to validity: internal threats and external threats" (Creswell, 2009, p. 162). Internal threats to validity arise from the procedures used or experiences of those participating in the research that might cause the researcher to draw incorrect assumptions. External threats to validity arise when incorrect assumptions are drawn from the data that is collected (Creswell, 2009). Validity is important because the sole purpose of grades is to accurately communicate to others the level of academic achievement that a student has obtained (Allen, 2005). Many grades are not valid because teachers grade their students in the manner they were graded as students. "What the literature suggests is that educators at all levels make decisions when assigning grades that are not based on sound principles of validity that ensure the grade is a meaningful communication of a student's level of academic achievement" (Allen, 2005, p. 221). Most teachers do agree that grades should reflect what students have learned and are able to do (Guskey & Jung, 2013). "Researchers examining the rationale behind teacher grading practices have found that individual teacher beliefs and values are significant influences" (Cox, 2011, p. 1). Cox (2011) continued, "Results (of the research) indicate that teacher's current grading practices remain largely traditional, based on a combination of achievement and effort" (p. 6). "Unfortunately, report card grades often mix compliance and understanding" (Fisher, Frey &

Pumpian, 2011, p. 46). Theoretically, one of the functions of a grading system is to motivate students to work harder and perform better" (Elikai & Schuhmann, 2010, p. 1). With all of these rationales and theories behind grading practices, what does go into a grade?

Actual achievement on curriculum standards is one piece of traditional grading practices. Other factors may include, "attendance, behavior, effort, extra credit, and participation" (Erickson, 2011, p. 66). Scriffiny (2008) agreed, stating that the system used to determine a student's grade "must not allow students to mask their level of understanding with their attendance, their level of effort, or other peripheral issues" (p 71). Marzano and Heflebower (2011) referred to such factors as creating an "omnibus" (p. 34) grade, or one that includes a plethora of items besides the actual achievement. Examples of compliance factors that may significantly influence a grade, either up or down, are homework and behavior. Homework may represent anywhere from 50% of the grade in some schools to 10% in other schools (Fisher et al., 2011). Although homework may signify understanding of work, it often becomes a home, organizational, or assistance issue.

Many times non-academic performance skews the reported grade and brings validity into question. "It is common practice for teachers to award extra points for bringing in tissue boxes, completing extra-credit assignments, returning permission slips, contributing canned food to the food drive, and so on. Such practices inflate grades and distort their meaning" (Erickson, 2011, p. 66). The letter grade becomes less meaningful when the items that influence the grade are not related to student achievement. "Extra credit and bonus points stem from the belief that school is about doing the work, accumulating points, and that quantity is the key—with more being better—rather than about achieving higher levels of learning" (O'Connor, 2011, p. 33). O'Connor (2011) cited 15 fixes for grades:

Fix 1: Don't include student behaviors (effort, participation, adherence to class rules, etc.) in grades; include only achievement (p. 16).

Fix 2: Don't reduce marks on work submitted late; provide support for the learner (p. 24).

Fix 3: Don't give points for extra credit or use bonus points; seek only evidence that more work has resulted in a higher level of achievement (p. 32).

Fix 4: Don't punish academic dishonesty with reduced grades; apply other consequences and reassess to determine actual level of achievement (p. 38).

Fix 5: Don't consider attendance in grade determination; report absences separately (p. 47).

Fix 6: Don't include group scores in grades; use only individual achievement evidence (p. 52).

Fix 7: Don't organize information in grading records by assessment methods or simply summarize into a single grade; organize and report evidence by standards/learning goals (p. 58).

Fix 8: Don't assign grades using inappropriate or unclear performance standards; provide clear descriptions of achievement expectations (p. 67).

Fix 9: Don't assign grades based on a student's achievement compared to other students; compare each student's performance to preset standards (p. 79).

Fix 10: Don't rely on evidence gathered using assessments that fail to meet standards of quality; rely only on quality assessments (p. 82).

Fix 11: Don't rely only on the mean; consider other measures of central tendency and use professional judgment (p. 90).

Fix 12: Don't include zeros in grade determination when evidence is missing or as punishment; use alternatives, such as reassessing to determine real achievement, or use "I" for Incomplete or Insufficient Evidence (p. 95).

Fix 13: Don't use information from formative assessments and practice to determine grades; use only summative evidence (p. 106).

Fix 14: Don't summarize evidence accumulated over time when learning is developmental and will grow with time and repeated opportunities; in those instances, emphasize more recent achievement (p. 120).

Fix 15: Don't leave students out of the grading process. Involve students; they can-and should-play key roles in assessment and grading that promote achievement (p. 126).

One of O'Connor's (2011) fixes includes not using student behaviors when measuring a grade. "Teachers combine achievement and other variables, such as behavior, into grades for several reasons" (O'Connor, 2011, p. 17). Teachers may do this to signify the importance of behavior and to reward students who are well behaved. Add to these factors the impact of not performing. Low grades were sometimes used to motivate students to try harder. "No research supports the idea that low grades prompt students to try harder. More often, low grades lead students to withdraw from learning" (Guskey & Jung, 2013, p. 80). "Grades are broken when zeros are entered into a student's academic record for missing evidence or as punishment for transgressions. When combined with other evidence, the resulting grade does not accurately reflect student achievement" (O'Connor, 2011, p. 95). "The key is that grades are based on public learning goals/ standards and reflect real achievement, not some vague perception of their effort and their achievement relative to their ability" (O'Connor, 2009, p. 209).

Although there are a multitude of variables that may affect reliability, there are some common areas that affect both reliability and validity. What external forces do teachers take into consideration as they compute and assign a grade? Cizek (2009) questioned a particular sample of work or behavior as yielding an accurate picture of what a student knows; that sample may or may not measure what is being asked. A student's knowledge or skill must be supported by adequate evidence, and that evidence is vital in an accurate assessment. Another major element affecting the actual grade given is the treatment of student effort (Brookhart, 2001). How the teacher handles poorly completed, not completed or late assignments, is reflected in the validity of the grade given the assessment.

The argument then moves to the reliability of methods of reporting grades. "Talking with educators about how to combine academic and nonacademic factors into grades gives insight into how teachers define grade" (Gullen, Gullen, & Erickson-Guy, 2012, p. 1). Students often ask teachers if a certain task or piece of information is going to be asked later on a test. "When instructors hear this, they should realize those particular students probably consider grades a higher priority than learning" (Durm, 1993, p. 294).

Guskey and Jung (2013) offered one solution to this dilemma. "Recognizing that merging these diverse sources of evidence distorts the meaning of any grade, educators in many parts of the world today assign multiple grades" (Guskey & Jung, 2013, p. 93). Their theory of grading distinguishes three elements of grading—product criteria, process criteria, and progress criteria. Product criteria focused on "what students know and are able to do at a particular point in time" (Guskey & Jung, 2013, p. 95). Process criteria emphasized "the final results and how they got there" (Guskey & Jung, 2013, p. 95). Progress criteria showed "how much students gain from their learning experiences" (Guskey & Jung, 2013, p. 95). "Reporting separate grades

for product, process, and progress criteria also makes grading more meaningful" (Guskey & Jung, 2013, p. 95).

"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" (Marzano & Helfebower, 2011, p. 34). "Standards-based education and the system of grading it entails improves student achievement; increases the accuracy and fairness of grades; and enhances communication between classroom teachers and students, parents, colleges, and employers" (Proulx, Spencer-May, & Westerberg, 2012, p. 30). Tierney, Simon and Charland (2011) found that there was a difference between policy and principle when looking at changing from traditional grading to standards-based grading. "Policies are considered to be directives given by organizations with the authority to mandate what must be done in practice, whereas principles are abstract guidelines about what should be done in practice" (Tierney et al., 2011, p. 211). There must be sound principles for a grading change that affect teacher practice. The four research-based principles these authors cited are

1. When the purpose of grading is to report on student achievement, grades should be referenced to the curriculum objectives or learning expectations (criterion referenced).
2. A grade should be an accurate representation of achievement, so non-achievement factors should be reported separately to permit valid interpretation by stakeholders.
3. Results from multiple assessments should be combined carefully, with weighting that reflects the learning expectations, to ensure that the grade accurately summarizes achievement.

4. Information about grading should be clearly communicated so that grades are justified and their meaning is understood by students, parents, and other teachers. (Tierney et al., 2011, p. 211)

Guskey and Jung (2013) reported that standards should have two components that need to be aligned with the report card.

> First, they describe specific elements of *content.* That is, they represent *what we want students to learn*. Second, they describe levels of *performance.* In other words, standards also indicate *what we want students to be able to do* with what they learn. (p. 98)

"Marks and grades are meaningful when—and only when—they are based on accurate assessment" (O'Connor, 2009, p. 174). Accurate assessment is necessary whether using traditional reporting or standards-based reporting.

Reliability of grading is affected by reporting choices that teachers make. O'Connor (2009) stated that "Teachers use a wide variety of assessment methods, but not all sources of information need to be included in grades" (p. 39). He continued by offering four teacher choices that impact how grades are determined.

1. Teachers must decide what evidence to use—everything or the most recent.
2. Teachers must decide the method they will use for 'number crunching.'
3. Teachers should use quality assessments and keep accurate records.
4. Teachers should take steps to ensure that students are involved in and understand their grades. (O'Connor, 2009, p. 41)

What Do Grades Reflect?

"Exploring whether they (teachers) provide common, consistent communication about their students' abilities can be challenging" (Gullen et al., 2012, p. 24). Grades should reflect what students know and are able to do (Erickson, 2011; Fisher et al., 2011). Grading is a process that continues to be developed. "Identifying and analyzing aspects of grading and reporting perceived as effective or ineffective by students could aid educators in the development of improved practice and policy" (Gwidt, 2010, para. 4). Letter grades are seen as a common language yet do not always lend themselves to a common interpretation. "Grades are the fundamental currency of our educational system; they signal academic achievement and noncognitive skills to parents, employers, postsecondary gatekeepers, and students themselves" (Pattison, Grodsky, & Muller, 2013, p. 1). "Educators (and the media) have a responsibility to educate parents and the community about the place of grades in the communication system" (O'Connor, 2009, p. 238).

Grades are the means by which teachers share a version of how students are performing. Motivated students try to accumulate points while unmotivated students tend to withdraw from the enticement of grades. When criteria are set and known by teachers, students and parents, students are more likely to respond to the opportunity for learning. "If the focus is on learning goals, grades should be as pure a measure of achievement as possible without penalties for such behaviors as handing assessment evidence in late" (O'Connor, 2010, p. 40). Grading must move to a shared practice based on agreed upon and clearly articulated principles or guidelines. More time should be spent on guiding students in the process of doing the work than on the grading of the work (Vanderbilt University Center for Teaching, 2012). This is true whether one is referring to daily grades, assignments, tests or other assessments.

Report card grades should reflect the student's understanding of the content (Fisher et al., 2011). Many teachers agree with this statement and want to think the grades put on the report card reflect student understanding. However, a closer look often reveals the grade is a combination of factors, including student understanding of the material. Report card grades often reflect academic achievement, effort, behavior and motivation (Brookhart, 2011), whether the teacher realizes it or not. Teachers are prone to helping students succeed, and actually practice inequity if they are not aware of the values underlying their grading decisions (Tierney et al., 2011). According to McMillan, Myran, and Workman (2002), 70% of grades given were either an A, B, or C due to variables used in grading rather than established measurement principles.

How Do Grades Relate to Standards?

Many states have formulated their own state standards, and the current move is toward adoption of the CCSS. Report cards are in a state of transition, with some schools moving from a traditional report card to a report card based on standards. Kentucky is the first state in the United States to develop a statewide standards-based report card for all grade levels (Guskey et al., 2011). Teachers are required to base grades on explicit criteria derived from articulated learning standards. Teachers report criteria using separate marks for product, process, and progress. Through work with teachers throughout Kentucky, the CCSS have been rewritten in parent-friendly language and teacher-manageable reporting standards.

The purpose of standards-based report cards is to align grading practices with content standards by measuring and reporting a student's proficiency (Oliver, 2011). Standards-based reports are criterion referenced, as students are measured according to specific learning expectations or curriculum. When these expectations are clearly identified and shared with

students, parents and other educators, grades become transparent and based on what is being learned rather than an accumulation of points. For all students, multiple individual notations of accomplishment need to be documented by educators in order ascertain student accomplishment of learning expectations.

Learning objectives can also be identified for individual students, according to specific, identified needs. Standards-based grading requires teachers to know where students are on the learning continuum and address individual needs, whether or not the student is identified as having a disability. According to Jung and Guskey (2007), if a student does have a disability, the case conference committee modifies particular standards that are not appropriate for the student, and grades do not have to be adjusted further because they are based on skills appropriate for the student. Multiple forms of criterion-referenced tests along with corrective exercises and the ability to retest students are also needed to support standards-based reporting (Lalley & Gentile, 2009).

Internal Assessments, External Assessments, and Grades

Stakeholders (students, parents, educators), receive information from various sources regarding the academic achievement of a specific child. The sources often include the teacher, the state, and external testing companies. Although multiple sources and multiple reports would seem to provide triangulation of data, when reports are disparate, there is more confusion than clarity on the part of parents—and even teachers. Stiggins (2006) reported that no single assessment is capable of meeting the information needs of all of the various users. In order to provide accurate information to all stakeholders, the source of the report must be analyzed and understood, and based on criterion referenced learning objectives.

Internal assessments, or classroom assessments, should be administered frequently and results should drive instructional decisions (Brookhart, 2011). These formative assessments are conducted during learning and must reflect learning targets or learning expectations of the student. All involved with the education of the students must have clearly identified learning goals to maximize the possibility of student achievement (Arter, 2010; Scanlan, 2003). The achievements of each student should also be tracked, with the student being actively involved in setting goals, knowing the plan for what is next, and tracking progress (Stiggins & Chappuis, 2005). In many cases, teachers would benefit from further training to improve the quality of assessments and from training on integrating assessment into instruction in a meaningful way (McMillan et al., 2002).

External assessments, or assessments driven by state/ national/ outside sources, are usually summative in nature. Many of these tests result in high-stakes reports that identify students or schools as being successful or not successful. The testing policies often do affect classroom instruction more often than pedagogy (Diamond, 2007). Even with the pending impact of high-stakes tests, the tests themselves have not been shown to maximize student motivation and learning (Stiggins, 2007b). In a study using the Massachusetts Comprehensive Assessment System (MCAS), some groups of students who were already faring poorly did even worse when high-stakes tests were used for promotion and graduation (Brennan, Kim, Wenz-Gross, & Siperstein, 2001). The study recommended educators rely on other academic factors to supplement test scores.

Elements Impacting Student Achievement

Extraneous Elements

Even when there appears to be a relationship between high-stakes test scores and report cards, a discrepancy is still shown to exist. In a study by Ross and Kostuch (2011), "while report cards reportedly foreshadowed external assessments with accuracy and timeliness, about 25% of the students were identified as misclassified, meaning that they did better or poorer on the external assessment than predicted by report cards" (p. 176). The authors called for transparency and precision on report cards to ensure parents received accurate information.

Willingham, Pollack, and Lewis (2002) based their study on patterns of individual and group differences in assessment. They found that the two measures often yield somewhat different results and offered a framework of possible sources of discrepancy between observed grades and test scores. Suggested differences included "content differences between grades and test scores, individual differences (including student characteristics) that interact with content differences, situational differences (across contexts or over time), and errors in grades or test scores" (Willingham et al., 2002, p. 31).

Grades motivate students through the local contract with the teacher; tests motivate teachers and schools through the external standards thereby imposed. Due to distinguishing characteristics, grades and tests have different strengths that tend to be complementary (Willingham et al., 2002).

The summary offered by Willingham et al. mirrored findings cited by Glass (2009). A research study sought to determine the relationship between end-of-course tests (EOCT) and teacher-issued course grades. Although the correlations were seen as statistically significant in most cases, demographically the correlations were not strong. When the mean of the EOCT

scores and the mean of the course grades were observed, it was apparent that the EOCT scores and course grades were not measuring the same thing. Again, extraneous factors such as attendance, behavior, and popularity also influenced student grades (Glass, 2009).

Motivation, Ability or Mindset

Many schools and even school districts post mission statements that are included as part of the goal to develop independent, lifelong learners. There is more to developing independent, lifelong learners than getting the right answers. "Too many schools are moving in the wrong direction. They are redoubling their emphasis on routines, right answers and standardization" (Pink, 2009, p. 185). Educators and parents often do not understand that grades are not always synonymous with student achievement.

Motivation. "The problem in the school system is that, as soon as grades are introduced, teachers, parents, and students emphasize grades rather than learning. Teachers usually say this happens because grades motivate" (O'Connor, 2009, p. 17). "Grades tend to reduce students' interest in the learning itself" (Kohn, 1999, p. 38). "In fact, when students are rewarded only with feedback on their performance and are not subjected to a grade, their performance is better than when they are graded" (Reeves, 2011, p. 105). "Actual success at learning then is the single most important factor in intrinsic motivation, and it is important to recognize that success is relative. Success for each individual is seeing oneself getting better" (Pink, 2009, p. 10).

"At the same time, no research supports the idea that low grades prompt students to try harder. More often, low grades lead students to withdraw from learning" (Guskey & Jung, 2013, p. 80). This may be a surprising development to some; however, there is a logic leading some students to think this way. "Meanwhile students whose grades don't measure up often that see themselves as failures and give up trying to learn" (Pink, 2009, p. 188). Guskey and Jung (2013)

continued by stating, “To protect their self-images, many students regard the low grade as irrelevant or meaningless. Others may blame themselves for the low grade but feel helpless to improve” (p. 80).

Student achievement and student learning must involve the student when setting learning goals. “Goals that people set for themselves and that are devoted to attaining mastery are usually healthy but goals imposed by others can sometimes have dangerous side effects” (Pink, 2009, p. 48). When students are not achieving, the best support a teacher can offer is to show them not only the skill area they are lacking, but how to get to the next level of learning. “We must be mindful of the fact that students are users of the information that comes from assessments, so the purpose of each assessment must be clear to them. We must also be sure that students understand the targets” (O’Connor, 2011, p. 127). Student descriptions of the ideal student were,

> A successful student is one whose primary goal is to expand their knowledge in their ways of thinking and investigating the world. They do not see grades as an end in themselves but as a means to continue to grow. OR: The ideal student values knowledge for its own sake, as well as for its instrumental uses. He or she hopes to make a contribution to society at large. (Dweck, 2006, p. 192)

People, usually adults, use rewards with students expecting to increase the motivation and behavior in a positive way. Often the unintended consequence is that the student’s intrinsic motivation toward a certain activity is undermined (Pink, 2009). Pink (2009) found that sometimes, “In direct contravention to the core tenets of Motivation 2.0, an incentive designed to clarify thinking and sharpen creativity ended up clouding thinking and dulling creativity. Why? Rewards, by their very nature, narrow our focus” (p. 42). Proposed incentives may come in the form of grades. “The more the task required creative thinking, in fact, the worse the

performance of students who knew they were going to be graded" (Kohn, 1999, p. 39). To be fair, grades do serve to motivate some students.

> Grades certainly motivate successful students, at least some of the time. But they are definitely not motivators for all students, such as those who get grades that are lower than they expect or think they deserve. For these students, grades in fact often act as *de-*motivators. (O'Connor, 2011, p. 8)

Focusing on the reward or challenge of the reward sometimes ends up clouding creative thinking and thereby hindering the learning that is embedded when a problem is seen through to solution. When students are offered extrinsic rewards for achievement, they can become so focused on the reward that their eventual success may actually be hindered (Pink, 2009).

> Educators must emphasize that learners are responsible for learning. It is then clear that the learner must be motivated by the intrinsic interest and the worth of what is being learned, not by the carrot-and-stick approach that emphasized gold stars and A's. (O'Connor, 2009, p. 18)

Making the extrinsic reward the goal of an activity can tempt students to reach the goal by any means possible, even if the product does not produce the intended learning goal. Intrinsic motivation becomes a reward in itself. "The primary reward for learning should be intrinsic to positive feelings that result from success" (Pink, 2009, p. 9). Students are motivated when they see themselves as learners.

Ability – aptitude. "Grading should always be related to learning goals" (O'Connor, 2009, p. 208). Some students may need modified learning goals—some higher and some lower. "For identified special education students, whether they are mainstreamed or not, the grades they receive should be based on the extent to which they meet the modified predetermined standards"

(O'Connor, 2009, p. 208). Tomlinson (2005) supported the ability of teachers to differentiate, or vary instruction. "Differentiated instruction is a philosophy of teaching purporting that students learn best when their teachers effectively address variance in students readiness levels, interest, and learning profile preference" (Tomlinson, 2005, p. 1). "The best guidance for schools on the application of grading to students with special needs is based on the principles with which we began this book: grades must be accurate, fair, specific, and timely" (Reeves, 2011, p. 118). All measurements of student work must be recorded accurately; the work asked of students should be communicated to students; student work should be specifically incremental, and feedback should be timely. The important caveat to this statement is that the principles for grading of exceptional students are the same as the principles for grading of non-exceptional students. "There is not inherent problem with the philosophy of differentiation and grading or reporting. Rather, the problems exist in how educators view and practice grading-even in the absence of differentiation" (Tomlinson, 2005, p. 1).

Regardless of ability, student engagement is the key to student learning. "We are bribing students into compliance instead of challenging them into engagement. Whatever they're studying, be sure they can answer these questions: Why am I learning this? How is it relevant to the world I live in now?" (Pink, 2009, p. 190). Being a self-determined learner does not mean mastering learning will be easy or without effort.

> In the end mastery often involves working and working and showing little improvement perhaps with a few moments of flow pulling you along then making a little progress and then working and working on that new slightly higher plateau again. (Pink, 2009, p. 123)

Learning can be grueling, and that struggle is the solution to learning and mastering concepts and ideas. Even very smart people have to work hard for their achievements. "No matter what your

ability one is, effort is what ignites that ability and turns it into accomplishment" (Dweck, 2008, p. 41).

Ability – mindset. Some researchers (Pink, 2009; Dweck, 2006; Ricci, 2013) proposed there is more to ability than just aptitude, which often is related to genetics or environment. "There are two meanings to ability not one: a fixed ability that needs to be proven OR a changeable ability that can be developed through learning" (Dweck, 2006, p. 15). Dweck (2006) coined the term "mindsets" (p. 15) to explain why some students were concerned with proving themselves while others could just "let go and learn" (p. 15).

Fixed mindset. People with the fixed mindset tend to expect their ability to supersede their need for effort; the qualities that they have are set, or fixed. A person with a fixed mindset is born with a certain amount of intelligence, a certain personality, and a certain moral character. Furthermore, they believe that a person must prove himself over and over (Dweck, 2006). "Once a student concludes that "I'm just not a good writer" or "I'll never get math," then it becomes strikingly more difficult to restore that student's confidence" (Reeves, 2011, p. 86). As learners, students with a fixed mindset are more interested when feedback reflects on their ability, even if this judgment of ability may not result in learning.

> When they were presented with information that could help them learn, there was no sign of interest. Even when they had gotten an answer wrong, they were not interested in learning what the right answer was. This is how the fixed mindset makes people into non-learners. (Dweck, 2006, p. 18)

If students identified with a fixed mindset did well right away, they stayed interested in the task at hand. If things were too challenging, fixed ability students tended most often to lose interest. Fegley (2010) found that many students he studied "may not be performing to the

learning levels they are capable of due to the student belief that greater or different effort will not result in improved learning success" (p. 1). For students who struggle with learning, the fixed mindset turns into a self-fulfilling prophecy. Students identified as advanced learners tend to become consumed with looking smart, regardless the cost, even to the point of avoiding learning situations (Ricci, 2013). "Common sense suggests that ability inspires self-confidence. And it does for a while—so long as the going is easy. But setbacks change everything" (Krakovsky, 2010, p. 2). "A fixed mindset does not allow people the luxury of becoming they have to already be" (Dweck, 2006, p. 25). "This student conviction may be due to (HMHS) students believing and accepting that academic achievement is due to their innate ability and not their learning effort" (Fegley, 2010, p. 1). Ricci (2013) found that as young as first grade, 10% of students saw some of their peers as being born smarter than others. By the time they reached third grade, the number had jumped to 42% of students having a fixed mindset. Ricci (2013), Pink (2009), and Dweck (2006) noted there is still hope, for mindset is a changeable quality, and fixed mindsets can become growth mindsets.

Growth mindset. "Although people may differ in every which way—in their initial talents and aptitudes, interests, or temperaments—everyone can change and grow through application and experience" (Dweck, 2006, p. 7). People have basic qualities that can be changed and cultivated through effort. "There is an almost endless list of 'non-natural' athletes who made big achievements against all odds and despite all recommendations to 'do something else " (Vermeij, 2013, p. 1). Those with a growth mindset take risks and confront challenges; they keep working at challenges because success is about stretching oneself, learning, growing, and improving (Stepitup^{2}Thrive, 2011). "The focus of a growth mindset individual is on learning, not on looking smart" (Ricci, 2013, p. 2). Combine challenging work and interest and

learning flows. "As talent can be developed, so can character and mindset be trained" (Vermeij, 2013, p. 1). Dweck (2006), Pink (2009), and Ricci (2013) all believe that mindsets are not static, rather they are evolving, changeable qualities that are possessed in varying degrees in varying areas within each of person.

Teacher impact. Sometimes, "our school structures eliminate opportunities, communicate low expectations, and prematurely remove students from challenging environments" (Ricci, 2013, p. 9). This is only one way the belief of teachers impact the growth of students. "Stereotypes tell teachers which groups are bright in which groups are, not so teachers with the fixed mindset no which students to give up on before they've even met them" (Dweck, 2006, p. 199). When teachers have low expectations for students, their students live up (or down) to those expectations. "The very assumption that certain students don't value education leads some educators to lower their expectations and offer these students a substandard curriculum" (Thompson, 2007, p. 2). The fixed mindset also leads teachers to *dumb down* material for students, assuming they cannot handle more challenging work. When students know do not know how to do something and others, do the gap seems unbridgeable. In response, some fixed-minded educators try to reassure their students that they are fine just as they are (Dweck, 2006).

> Countless teachers have low academic standards for certain students, many teachers inflate the grades of these students, and even when these students go directly to two- or four-year colleges and universities after high school, they are more likely to end up needing to take remedial math and English classes, decreasing their chances of graduating from college. (Thompson, 2007, p. 2)

"A child with a fixed mindset may give up easily and not engage in the learning process"

(Ricci, 2013, p. 4). "Simply raising standards in our schools without giving students the means of reaching them is a recipe for disaster it just pushes the poorly prepared or poorly motivated students into failure in and out of school" (Dweck, 2006, p. 194).

How do growth-minded teachers and students react to challenging situations? "Growth minded teachers tell students the truth and then give them the tools to close the gap" (Dweck, 2006, p. 199). Ricci (2013) posited the mindset of the educator directly influences how a child not only views himself or herself as a learner but also how he or she faces academic challenges. "A child's mindset directly affects how he or she faces academic challenges. A child with a growth mindset perseveres even in the face of barriers" (Ricci, 2013, p. 4). "Helping students to manage their minds so that they can get the best out of themselves is one of the greatest gifts teachers can provide" (Gerson, 2013, para 5). "An educator with a growth mindset believes that with effort and hard work from the learner, all students can demonstrate significant growth and therefore all students deserve opportunities for challenge" (Ricci, 2013, p. 2).

Teachers with a growth mindset try to figure out what students don't understand and what learning strategies students need for learning to occur. Regardless of whether their students are learning, or they themselves are learning, growth mindset teachers are fascinated by the process of learning (Dweck, 2006). Pink suggested teachers should ask students about their passions and help students develop into classroom experts, calling upon them as needed throughout the school year. "A classroom of teachers is a classroom of learners" (Pink, 2009, p. 196). When teachers can turn students into learners, students become teachers of themselves and of others. When students believe teachers are judging them, students will sabotage the teacher by not trying. "When students understand school is for them—a way to grow their minds—they do not insist

on sabotaging themselves" (Dweck, 2006, p. 201). This shift in mindset allows learning to take place.

Adolescents and ego. If educators want to develop students into intrinsically motivated, lifelong learners, students must see themselves as learners, especially during the adolescent years. "Adolescence is a time of opportunity a time to learn new subjects a time to find out what they like and what they want to become in the future" (Dweck, 2006, p. 59).

> The presence of a growth or fixed mindset seems to be especially crucial during the middle school years, a time when the work becomes more demanding, grades take on greater salience, and teachers can be perceived as less supportive. Indeed, research demonstrates that seventh graders with a growth mindset see their grades improve over a two-year period of middle school, while students with a fixed mindset see no such improvement. (Damour, 2011, p. 2)

Adolescence is a time when students tend to become more focused on friendships and themselves and thereby put precious little effort on learning. This low effort syndrome is "often seen as a way in which adolescents assert their independence from adults, but it is also a way that students with the fixed mindset protect themselves" (Dweck, 2006, p. 58). "Students with a fixed mindset usually give up easily or take easier courses because grades and looking good to others are most important" (Gerson, 2013, para. 2). Teachers of adolescents must realize that lowering standards during this adolescent time does not protect the egos of the students they serve.

> If you're a teacher remember that lowering standards doesn't raise students' self-esteem, but neither does raising standards without giving students a way of reaching them. The

> growth mindset gives you a way to set high standards and have students reach them. (Dweck, 2006, p. 212)

"Students with a growth mindset usually persist in the face of difficulties and take challenging courses because learning and developing their minds are most important" (Gerson, 2013, para 2).

Effort or resources. One effect of poverty noted by Dweck (2006) was, "people have different resources and opportunities" (p. 47). Duncan and Murane (2014) studied the effects of poverty on children and their education. "Historically, this country has relied on its public schools to help level the playing field for children born into different circumstances" (p. 2).

> In high-poverty elementary schools, about 55 percent of all students perform below grade level on standardized tests, and this hardly improves as they move to the middle grades. As a result, by the time students enter ninth grade in high-poverty high schools, around 80 percent are over-age for their grade or have reading and math skills that are below the seventh-grade level. (Rowan, 2011, p. 524)

A number of research studies have been conducted to determine if there is a relationship between SES and student achievement. "These studies have demonstrated that children in low-SES families have a reduced ability to suppress distractors at the neural level and have more general reductions to prefrontal cortex activity even during rest" (Nelson & Sheridan, 2011, p. 38). The connection is made in these studies because students must know how to self-regulate their behavior in order to learn in a classroom setting. Ricci offered another view, tying the neuroplasticity of the brain into how summer breaks. "Some children are at a disadvantage academically simply because they don't have the opportunities to learn at the same levels of their peers during the summer months" (Ricci, 2013, p. 6). Neural connections are weakened or eliminated if not used—in this case, the connections in the brain used for learning are less likely

to be used by students whose parents are poor. Students of more affluent parents have more learning opportunities over the summer (Ricci, 2013). Although all students have the same number of days out of public school for the summer, the days are not spent with equal quality.

Another area of difference that affects students is the surrounding community students are raised in. "Rich, educated, connected effort works better" (Dweck, 2006, p. 47). "Students in the bottom quintile of family socioeconomic status score more than a standard deviation below those in the top quintile on standardized tests of math and reading when they enter kindergarten" (Reardon, 2011, p. 92). A better education often translates to a better job, which brings in a network of influential friends. People who know how to be in the right place at the right time all stand a better chance of having their effort pay off (Duncan & Murane, 2014; Dweck, 2006).

> Children from different social groups enter school with very different skills and behaviors. Comparing children in the bottom and top quintiles of SES, we show that low-SES children are 1.3 standard deviations lower than high-SES children in their kindergarten-entry math skills, nearly two-thirds of a standard deviation below in teacher ratings of attention skills, and one-fourth of a standard deviation worse in terms of teacher-reported antisocial behavior. (Duncan & Magnuson, 2011, p. 47)

This gap in skills does not translate to a lack of parental concern or care about education.

> Because parent involvement has been linked to several positive outcomes, including better grades for students, it is understandable why some educators and policymakers blame parents for their children's poor academic performance. However, even though this mind-set is prevalent throughout the United States, research has shown that most parents, including low income, African American, and Latino parents do care about their children's education (Thompson, 2007, p. 2).

Other factors that create a disparity between students include family structure, education levels of parents, and parental management of student lives. Poor students tend to have single-parent family structures more often than more affluent students (Duncan & Murane, 2014). Parents with greater education *know the ropes* and can guide their children into opportunities that will support a future job. Students from lower income families tend to get less support from their parent(s) and often the parent has less education or networking skills to provide internships for future jobs. As parents make more money, they are more likely to provide adult support for their child's activities than parents needing to work to meet essential needs for the family. Factors such as these combine to allow affluent students to come to school more ready to learn than poor students. "Remember that effort isn't quite everything and that not all effort is created equal" (Dweck, 2006, p. 48).

Next Steps – To Grade or Not to Grade

With the tumult surrounding grades, the easiest suggestion some may have would be to not give grades. Although that idea has merit with some, the problem is more with defining the purpose of grades. According to Guskey and Jung (2013), when educators are asked to give their purpose for grading, there are six major categories:

1. To communicate information about students' achievement to parents and others;
2. To provide information to students for self-evaluation;
3. To select, identify, or group students for certain educational paths or programs;
4. To provide incentives for students to learn;
5. To evaluate the effectiveness of instructional programs; and
6. To provide evidence of students' lack of effort or inappropriate responsibility. (p. 69)

The question for educators is then to agree on which of the six purposes of grading is the most important for their classroom, their building, their district.

In a survey by Guskey and Jung (2013), teachers were asked to rank the above purposes for grading, as well as to answer open-ended questions about why we use report cards and grades. Again, this was not because there is a right or wrong answer to the questions, however the questions must be asked of educators in order to determine the understanding of grades by the teachers. Guskey and Jung (2013) found that there was no one method of grading and reporting that served all six of the purposes well. The discussion for grading and the purpose of grading must be explored at the district and building level, with input from all stakeholders in order to gain understanding. There are both advantages and disadvantages with traditional letter grades, percentage grades, and standards-based grades.

The Impact of College and Career Readiness Standards on Grading and Reporting

With the adoption and implementation of versions of CCSS spreading across the United States, adopted as College and Career Readiness Standards (CCRS) in Indiana, new discussion as to assessment and grading has been given more impetus. "School leaders, families, and educators recognize that the traditional reporting tools that have been used for the past century to report student progress provide minimal representation of student achievement" (Craig, 2011, p. 8). Due to the new accountability designations and the accompanying consequences for students, schools, corporations and states, educators now feel a sense of urgency to have a reporting tool for traditional grades that can complement the accountability reports given to students through the use of external assessments. Traditional grades worked as a method of reporting when work habits and other extraneous habits could be absorbed into grades. The

challenge for educators now is to assess and report the level of success for all students at the appropriate level for the student (Craig, 2011).

Part of the problem is that too few educators have extensive knowledge of "various grading methods, the advantages and shortcomings of those methods, and the effects that different grading policies have on students" (Guskey & Jung, 2012, p. 23). There are four major steps in grading reform that school leaders need to address. The purpose of grading and reporting must be clear to parents, teachers, students and school leaders (Guskey & Jung, 2012). When the purpose of grading is not clear, teachers tend to create policies that address all of the purposes while addressing none of them well. Knowing what the grades mean, what evidence is used to determine the grade, and how the information is communicated and used drives the discussion and yields reform and improvement in the understanding of student achievement (Guskey & Jung, 2013).

A second step in grading reform is discussion of what the grade actually does reflect. When teachers combine effort, attendance, and attitude as well as achievement, the grade becomes a "hodgepodge" (Guskey & Jung, 2009, p. 93). Brookhart (2011) and Guskey and Jung (2013) proposed a separation of criteria to better reflect student achievement. Product criteria reflect the current level of achievement the student produces. Process criteria take into account the extraneous variables of responsibility, work habits and effort when determining a grade. Progress criteria allows for much of the differentiation of student work by addressing learning gains and educational growth. After establishing specific indicators of each of these criteria, teachers can then report separate grades for each area. Understanding and communication of the criteria and indicators are key components of multiple grades being reported with success (Guskey & Jung, 2012).

The final two steps as seen by Guskey and Jung (2013) deal more with special populations, each at an extreme end of the achievement spectrum. Grading as a ranking of students has outlived its usefulness because it causes students to compete with each other for the purpose of ranking. If the focus of learning is on developing talent rather than ranking students, the competition for learning could actually be enhanced. "Rigorous academic criteria are established for attaining the high honor categories, but no limit is set on the number of students who might attain that level of achievement" (Guskey & Jung, 2012, p. 26). On the other end of the academic spectrum, grading students who struggle with learning can be addressed by modifying the skill or standard being measured. Low grades do not have a positive effect on learning for most students (Guskey & Jung, 2013; Stiggins, 2007b). Open and honest reporting of student learning on the level of work they are able to complete is an alternative to failing grades on a standard that is unattainable for students, as determined by the case conference committee (Guskey & Jung, 2013). Figure 1 shows one possible way of reporting a student's progress with modified standards. In this scenario, a letter grade is offered and numbers support student achievement in skill areas. The number 3 represents work completed with some help, and the number 4 represents work completed with minimal help. The asterisk does indicate that some of the work was modified or accommodations were implemented to assess the skill.

	Marking Period			
Subject	1	2	3	4
LANGUAGE ARTS	B*			
Reading	3*			
Writing	4*			
Listening	3			
Speaking	3			
Language	4*			

*Grades marked with an asterisk are based on modified expectations.
For additional detail, please see the attached progress report.

Figure 1. Sample Report of Student's Progress with Modified Standards.

Most standards include content, or what students are to learn, and performance, or what students are able to do with what they have learned. "Educators have made great strides in recent years in developing standards for student learning. . . Educators also have been working hard to create better and more authentic assessments to measure students' proficiencies based on those" (Guskey & Jung, 2013, p. 99). With the adoption of clear learning standards, it is incumbent upon the leadership in educational communities to develop a reflective reporting system that meets the needs of various stakeholders by communicating achievement of a variety of student learners.

Principals, as school leaders, must bring to the forefront changes that have taken place in both evaluation and assessment practices. "They must ensure that the grading practices used in their schools are based on quality assessment principles and they should work with their entire faculty to develop a quality assessment environment" (O'Connor, 2001, para. 2). Townsley (2013) described the struggle in his school district to change to standards-based grading. Two axioms changed his grading practice as a teacher, and helped him, when he became an

administrator, work with other district leaders move to a new philosophy on how to best reflect what students have learned. "Axiom 1: Report learning targets rather than assignments, assessments, and behavior" (Townsley, 2013, p. 68). Grades are calculated on how students demonstrate understanding of identified standards. "Axiom 2: Value what students learn over when they learn it" (Townsley, 2013, p. 68). Students are allowed to demonstrate their knowledge of material through the use of activities provided for extra learning and practice. A four-point scale, written in the grade book in pencil, allows the teacher to assess and reassess student demonstration of content. "As we've work through the challenges, our teachers, administrators, and board of education have remained committed to moving forward with a transition that we believe will better reflect what students have actually learned in our schools" (Townsley, 2013, p. 71). Change in how a teacher reports the knowledge a student demonstrates must involve layers of people and roles and support within the school system.

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. 86). Communication between teachers and students, as well as parents, of where a student starts and how a student is progressing is essential. Guskey and Guskey (1994) cited two guidelines for fair, equitable, and useful guidelines for reporting grades: "1) Provide accurate and understandable descriptions of learning …2) Use grading and reporting methods to enhance, not hinder, teaching and learning" (p. 17). Guskey and Guskey (1994), Tomlinson (2011), and Townsley (2013) all agreed that the work to change grading practices is not an easy journey, but is a reform that is needed. "In the beginning of the 21st century; however, the field lacks compelling evidence of reform" (Cox, 2011, p. 68).

CHAPTER 3

RESEARCH METHODOLOGY

The purpose of this study was to determine if there is a difference between how academic achievement is measured when using standards-based report cards and how academic achievement is measured using traditional report cards. Students are given letter grades, or other indicators to summarize their achievement. These letter grades/indicators are communicated to parents, typically on report cards, multiple times per school year. Furthermore, according to research supported by both Dweck (2006, 2008) and Pink (2009), the mindset of students is another key factor in the achievement of students. Does the use of standards-based or traditional report cards have a differing impact on the mindset of students?

Research Questions

This study addressed the following questions and subquestions: What reporting systems do elementary teachers in the state of Indiana use, and what impact does each have on assessment, communication and student mindset? Is there a difference between the perceptions of teachers using traditional report cards and those using standards-based report cards in the areas of assessment, communication or mindset of students?

Q1a. Is there a significant difference on assessment composite scores based on reporting systems within high-poverty schools?

Q1b. Is there a significant difference on assessment composite scores based on reporting systems within low-poverty schools?

Q2a. Is there a significant difference on communication composite scores based on reporting systems within high-poverty schools?

Q2b. Is there a significant difference on communication composite scores based on reporting systems within low-poverty schools?

Q3a. Is there a significant difference on mindset composite scores based on reporting systems within high-poverty schools?

Q3b. Is there a significant difference on mindset composite scores based on reporting systems within low-poverty schools?

Null Hypotheses

The following represented the null hypotheses.

$H_0$1a. There is no significant difference on assessment composite scores based on reporting systems within high-poverty schools.

$H_0$1b. There is no significant difference on assessment composite scores based on reporting systems within low-poverty schools.

$H_0$2a. There is no significant difference on communication composite scores based on reporting systems within high-poverty schools.

$H_0$2b. There is no significant difference on communication composite scores based on reporting systems within low-poverty schools.

$H_0$3a. There is no significant difference on mindset composite scores based on reporting systems within high-poverty schools.

$H_0$3b. There is no significant difference on mindset composite scores based on reporting systems within low-poverty schools.

Study Sample

This quantitative study utilized a survey to collect information from teachers of students in Grades K-5 across the state of Indiana. A list of teachers was generated from the Indiana Department of Education (IDOE) website and then narrowed to teachers of students in Grades K-5. A Letter of Consent to Participate (Appendix A) was sent to the narrowed list of teachers inviting them to participate in my study. The survey (Appendix B) was administered after Institutional Review Board approval (Appendix C). Teachers were asked three information-gathering questions and then asked to rate their perceptions of effectiveness to seven questions about each identified area—assessment, communication and mindset—based on their perceptions of students and their own teaching philosophy.

Survey Design

This study utilized a survey that allowed me to collect information from teachers online. The survey asked teachers to use a Likert scale to identify their responses. Teachers used a six-point Likert scale to indicate the level of effectiveness response to the questions. Choices offered to teachers were; *strongly agree* (6), *agree* (5), *somewhat agree* (4), *somewhat disagree* (3), *disagree* (2) and *strongly disagree* (1). The data were collected anonymously through the use of Qualtrics. The three demographic questions were asked at the end of the survey to ascertain the number of years the teacher had taught Grades K-5; the type of reporting system used by the teachers; and the socioeconomic (SES) level of buildings as reported by teachers. Respondents were divided into two groups based on experience: two or fewer years and more than two years. Teachers within their first two years are part of the IMAP process in Indiana and

are considered novice. The survey then, using research from Chapter 2 of this study, focused seven questions on each of the following areas: assessment of academic achievement of students; communication by teachers of academic progress to students/parents; and mindset of students/teachers, as identified by teachers. The results of the survey were downloaded from Qualtrics and imported into SPSS Version 20.0. Using SPSS Version 20.0, a statistical analysis was conducted to determine whether the six nulls found within the study were retained.

In order to ascertain the validity of the survey, members of the Indiana State Educational Leadership Cohort in Kokomo and teachers in Grades K-5 in Kokomo School Corporation were asked to review the questions. These individuals were not invited to participate in the study. Cohort members and teachers in Grades K-5 in Kokomo School Corporation were asked to read the survey questions to determine if the survey was easy for teachers to understand, if the directions were easy to follow, if the length of the survey was reasonable for the respondents, and whether the questions focused on the intended outcomes. Feedback from the cohort members and from teachers within Kokomo was used to make adjustments to the survey questions. The feedback comments centered around adding a word to clarify the statement, such as (learning goals) to explain "learning targets." After the survey results were collected, a Cronbach's alpha test was used to estimate the internal consistency of reliability of survey items.

> Cronbach came up with a measure that is loosely equivalent to splitting data in two in every possible way and computing the correlation coefficient for each split. The average of these values is equivalent to Cronbach's alpha, which is the most common measure of scale reliability. (Field, 2009, p. 674)

A Cronbach's alpha test was run on each area scored—assessment, communication, and mindset—therefore yielding three different Cronbach's alpha scores. A Cronbach's alpha score

of .70 was needed to assume reliability (Field, 2009, p. 675). If a question caused the Cronbach's alpha score to fall below a .7 minimum then the question was removed until the .7 threshold was reached. "This option provides a value of Cronbach's alpha for each item on your scale. It tells us what the value of alpha would be if that item were deleted" (Field, 2009, p. 677). An unreliable question should not impact the overall reliability. "If it does, then we have serious cause for concern and you should consider dropping that item from the questionnaire" (Field, 2009, p. 677). If the .7 level is unable to be obtained, then the null hypotheses on found within the study on that variable will not be tested.

Instrumentation

The survey contained a total of 24 questions, with seven pertinent questions for each area identified by research from such sources as O'Connor (2009), Reeves (2011), Guskey (2006), Dweck (2006), and Pink (2009). Research by O'Connor (2009) and Reeves (2011) brought to the forefront the appropriate and inappropriate use grades to indicate the learning of students. Guskey (2006) was a proponent of getting educators to consider the role of standards and assessments when reporting student achievement. Dweck (2006) posited there is an internal wiring in the mind of a student that either allows them to learn new information (growth mindset) or inhibits them learning from new challenges (fixed mindset). Pink (2009) examined whether or not rewards are the real motivators to achieve, specifically why they work with some but not with other students.

Data Collection Process

Invitations to participate in the survey were sent to teachers of students in Grades K- 5 compiled from a list of teachers generated from the IDOE website, then narrowed to teachers of students in Grades K-5. Information in the e-mail preceded the survey,is found inAppendix B

(i.e., letting teachers know the purpose of the survey and requesting their help to gather information). Teachers were notified that they could opt out of the survey by either not responding or by clicking out of the survey at any point. A follow-up e-mail was sent to teachers after 10 days, thanking them for their participation in the survey and asking them to participate if they had not yet done so. After five more days, the survey closed. Information collected was stored on a password-protected hard drive and the information was used as data for analysis through SPSS Version 20.0. Results of the survey were confidential and names of participants were not gathered for the purposes of this study. I will maintain information collected for three years in a secure location. Following collection of the survey data, a composite score was calculated. Scores for each question ranged from 1 = *strongly disagree* to 6 = *strongly agree*, with each of the three areas yielding a range of seven to 42. Each of the seven responses to assessment, communication, and student mindset were added within each area to yield the composite score after reliability had been ensured with SPSS through the Cronbach's alpha test. If questions were removed in order to increase reliability to acceptable levels, then the composite score maximum for each question removed was reduced.

Statistical Analysis

The statistical analysis was completed using a one-way ANOVA. "For experimental designs with categorical information (groups) on the independent variable and continuous information on the dependent variable, researchers use *t* tests or univariate analysis of variance (ANOVA)" (Creswell, 2009, p. 166). The one-way ANOVA determined if there was a significant difference on one dependent variable, the composite score, with one independent variable, the reporting type, which had three levels of reporting (traditional, newly implemented standards-based, and experienced standards-based). Newly implemented standards based were

identified as teachers using standards-based report cards less than three years; experienced standards-based were those teachers using standards-based report cards three years or more. The analysis also offered information on what reporting systems elementary teachers in the state of Indiana used, and what impact the reporting system had on assessment, communication and student mindset.

In the event the ANOVA testing yielded a significant difference between means, a post-hoc test was used. A post hoc test allowed me to determine where the significant difference lies in the model. Either a Tukey's HSD or Games-Howell post hoc test was used, depending on whether the homogeneity of variance was violated. If the assumption was met, then the Tukey HSD post hoc test was utilized. "When you have equal sample sizes and you are confident that your population variances are similar then use R-E-G-W-Q or Tukey because both have good power and tight control over the Type I error rate" (Field, 2012, p. 4). If the assumption was violated, then the Games-Howell post hoc test was used as this test does not require equal variances. Field noted, "I recommend running the Games-Howell procedure in addition to any other tests you might select because of the uncertainty of knowing whether the population variances are equivalent" (Field, 2012, p. 4).

Summary

In this chapter, research methodology was discussed as well as the type of study, sample, research design, instrumentation, data collection process, statistical analysis to be used, research questions, and null hypotheses. The use of a survey allowed teachers of students in Grades 3-5 to inform me about the use of standards-based and traditional report cards in Indiana. Teachers also offered insight into whether the report card type yielded an impact on assessment, communication, and student mindset. Chapter 4 presents the findings yielded by the survey.

Chapter 5 shares the impact of the results presented in Chapter 4, as well as implications from the study and future areas of research.

CHAPTER 4

FINDINGS OF THE DATA ANALYSIS

The purpose of this study was to determine whether or not there is a significant difference between the perceptions of teachers using traditional report cards and those using standards-based report cards in the areas of assessment, communication, and mindset of students. Teachers were surveyed and data collected regarding assessment, communication, and student mindset as seen through the lens of educators using standards-based reporting and those using traditional reporting systems. The variables included the number of years the respondent had used the current reporting system and the percentage of students receiving free/reduced lunch.

I developed the quantitative Reporting Methods Survey to measure the impact of reporting methods on assessment, communication, and student mindset. The Reporting Methods Survey consisted of 24 questions. Seven questions in each of three areas of assessment, communication, and mindset comprised the bulk of the survey. The questions from each area were mixed within the survey, without identifying which area the question represented. The questions themselves were derived from the related literature and research for the study. Three demographic questions were included to determine which reporting method the respondent used, how long the reporting method had been used by the respondent, and the socioeconomic status of the students within the schools represented.

At the beginning of the survey, respondents were asked to continue if they were a teacher in Grades K-5 and to please close the survey if they were a teacher in a grade other than K-5. Teachers who continued were asked to respond to questions presented in an online format displaying three questions per page from the survey. The options for the respondents on Questions 1-24 were based on a six point Likert scale with 1= *strongly disagree* and 6 = *strongly agree*. Respondents were asked to indicate the degree to which they agreed or disagreed with the statements in the survey. Some questions were reverse-coded, meaning research indicated some answers would lean more toward *disagree* and some toward *agree*. The final three questions were demographic in nature. Question 25 asked respondents to indicate the type of reporting system (report card) used in their building—traditional or standards-based. The next question (Question 26) asked how long the respondent had used this type of report card, with the options being *fewer than three years* or *three years or more*. The final question of the survey asked respondents the free/reduced percentage of students within the building. There were three options to this question—above 50%, 35%-50%, and below 35%.

E-mail addresses of all licensed teachers who were currently teaching were obtained in April, 2015 from the IDOE. A total of 7,903 e-mail addresses were given to me by the IDOE. Teachers from the Kokomo School Corporation, my home school corporation, as well as addresses that were duplicates or null were removed prior to sending out the surveys. A total of 6,843 surveys were sent through Qualtrics software, with "bounce backs" trimming the number of possible respondents to 6,760. During the course of the survey, 1,795 (26%) were opened; of those opened, 561 (8.3%) were started, and 451 (6.7%) of those started were completed and included in the survey data.

Once the results were collected, the Qualtrics software imported the data to SPSS for analysis. The results of the survey were somewhat challenging to interpret. Inspection of reliability using a Cronbach's alpha test did not yield the required .7 needed to assume reliability. When the scores were under .7 after eliminating poor questions that could impact the reliability, a factor analysis looking for eigenvalues above 1 was completed. A factor analysis is "a multivariate technique for identifying whether the correlations between a set of observed variables stem from their relationship to one or more latent variables in the data, each of which takes the form of a linear model" (Field, 2009, p. 786). Latent variables cannot be directly measured, but are assumed as being related to several variables that can be measured. "By looking at the eigenvalues for a data set, we know the dimensions of the ellipse or rugby ball: put more generally, we know the dimensions of the data. Therefore, the eigenvalues show how evenly (or otherwise) the variances of the matrix are distributed" (Field, 2009, p. 243). Field (2009) later stated, "Eigenvalues are conceptually equivalent to the F-ratio in ANOVA and so the final step is to assess how large these values are compared to what we would expect by chance alone" (p. 601). Kaiser's criterion is defined as

> a method of extraction in factor analysis based on the idea of retaining factors with associated eigenvalues greater than 1. This method appears to be accurate when the number of variables in the analysis is less than 30; and the resulting communalities (after extraction) are all greater than 0.7, or when the sample size exceeds 250 and the average communality is greater than or equal to 0.6. (Field, 2009, p. 788)

The use of the factor analysis identified six iterations that had initial eigenvalues > 1. The pattern matrix then yielded 17 questions that were related on four of the iterations. The four factors composing new composite scores were communication from the viewpoint of parents,

communication from the viewpoint of teachers, mindset, and assessment. These were the same basic areas addressed by the hypotheses outlined within the text of this study; however, only 17 of the 24 questions were needed for the calculation of the composite scores.

Items within the survey were grouped into four areas (Table 1) each having an eigenvalue of > 1. Those areas were Teacher Communication (TC; $M = 3.9$, $SD = .55$), summarized as communication from the teacher's perspective; Parent Communication (PC; $M = 4.6$, $SD = .63$), viewed as communication from the parent's perspective; Student Mindset (SM; $M = 4.4$, $SD = .47$); Assessment (A; $M = 4.4$, $SD = .70$).

Table 1

Items Contained Within the Survey

Item	Area
Parents care about the education of their child(ren).	PC
Feedback on a student's work is more helpful to students than a letter/ number grade.	TC
Students in my classroom know their learning targets (learning goals).	A
Public schools help level the playing field for all students.	-
The process of learning is more fascinating than the content of learning.	SM
The expectations of the teacher influence the achievement of his/ her students.	SM
The ability of a student to learn remains relatively constant throughout school.	-
Looking 'smart' to peers is important to student learning.	SM
Students who are smart do not need to put forth effort.	-
Students are motivated when they see themselves as learners.	SM
Incentives produce learning just as engagement produces learning.	-SM
It is important for students to help create learning goals.	SM
Letter grades offer the incentive for students to learn.	TC
Parents view report card grades as how well their child is achieving.	-
Test scores are accurate measures of student achievement.	-PC
Formative, ongoing assessments are key elements of instruction.	PC
Parents in my class know the learning goals of their child.	A
Report card grades reflect academic achievement, effort, behavior, and motivation.	TC
Students are allowed to redo assignments/ assessments without penalty.	A
Grades allow parents to clearly understand and support the learning process.	TC
Parents support educational opportunities for their child(ren) outside of the school day.	PC

Descriptive Statistics

Frequency Data for Whole Sample

A total of 451 (6.7%) elementary teachers in Indiana completed the survey. The survey offered statements to which teachers were offered the options of these responses: strongly agree, agree, somewhat agree, overall strongly disagree, disagree, and somewhat disagree. For reporting purposes, the whole sample data was initially reported as overall agree and overall disagree. Overall agree encompassed strongly agree, agree, and somewhat agree and overall disagree encompassed strongly disagree, disagree, and somewhat disagree.

When teachers were given the statement, "Parents care about the education of their child(ren)," the majority agreed. Of the 451 responses, 424 (94%) were in the overall agree category, and 27 (6%) of the respondents were in the disagree category. Specifically, 246 of the 451 (54.5%) agreed that parents cared about the education of their children, 92 (20.4%) somewhat agreed, and 86 (19.1%) strongly agreed. Of those who disagreed that parents cared about the education of their children, 14 teachers (3.1%) somewhat disagreed, seven (1.6%) somewhat disagreed, and six (1.3%) disagreed.

Teachers were asked if feedback on a student's work was more helpful to students than a letter or number grade. Overall, 414 teachers (91.7%) agreed and 37 teachers (8.3%) disagreed. Those in the agree category were somewhat evenly spread, 177 teachers (39.2%) agreed, 127 teachers (28.2%) strongly agreed, and 110 teachers (24.4%) entered somewhat agree that feedback on a student's work was more helpful to students than a letter or number grade. Of those who disagreed, 21 teachers (4.7%) somewhat disagreed, nine teachers (2.0%) disagreed, and seven teachers (1.6%) strongly disagreed.

A large percentage of teachers (440/451 or 97.6%) overall agreed with the statement "Students in my classroom know their learning targets (learning goals)." Again, 241 (53.4%) of the respondents agreed, 74 respondents (16.4%) strongly agreed, and 125 respondents (27.7%) agreed somewhat. Of the 11 out of 451 (2.4%) who disagreed overall, six respondents (1.3%) somewhat disagreed, four respondents (0.9%) disagreed, and one respondent (0.2%) strongly disagreed.

The next statement, "Public schools help level the playing field for all students," demonstrated an overall agreement rate of 364 teachers (80.7%). Of those who agreed, 83 teachers (18.4%) strongly agreed, 144 teachers (31.9%) agreed, and 137 (30.4%) somewhat agreed. Of those who disagreed, 55 teachers (12.2%) somewhat disagreed, 27 teachers (6.0%) disagreed, and five teachers (1.1%) strongly disagreed.

"The process of learning is more fascinating than the content of learning" had an overall agreement by 371 (82.3%) of the teachers. Of those who agreed, 54 (12.0%) strongly agreed, 175 (38.8%) agreed, and 142 (31.5%) somewhat agreed. Of the 80 (17.7%) teachers who overall disagreed that the process of learning is more fascinating than the content of learning, 59 (13.1%) somewhat disagreed, 20 (4.4%) disagreed, and one (0.2%) strongly disagreed.

A total of 411 (91.2%) teachers agreed or strongly agreed that "The expectations of the teacher influence the achievement of his/her students." There were 274 (60.8%) who strongly agreed, 137 (30.4%) who agreed, and 29 (6.4%) who somewhat agreed for an overall agreement 440 of 97.5%. Eleven teachers disagreed that a teacher's expectations influenced the achievement of his/her students, seven teachers (1.6%) somewhat disagreed, one teacher (0.2%) disagreed, and three teachers (0.7%) strongly disagreed.

A split of teachers was demonstrated when the statement, “The ability of a student to learn remains relatively constant throughout school” was proposed. Of those, 19 (4.2%) strongly agreed, 104 (23.1%) agreed, and 135 (29.9%) somewhat agreed for an overall agreement of 258 teachers (57.2%). Of the 193 teachers (42.8%) who disagreed overall that the ability of a student to learn remains relatively constant throughout school, 97 teachers (21.5%) somewhat disagreed, 78 teachers (17.3%) disagreed, and 18 teachers (4.0%) strongly disagreed.

“Looking ‘smart’ to peers is important to student learning” had an overall agreement by 331 teachers (73.4%); 19 teachers (4.2%) strongly agreed, 106 teachers (23.5%) agreed, and two teachers (45.7%) somewhat agreed. Overall, 120 teachers (26.6%) disagreed that looking smart to peers was important to student learning. Of those who disagreed, 62 teachers (13.7%) somewhat disagreed, 51 teachers (11.3%) disagreed, and seven teachers (1.6%) strongly disagreed.

A number of teachers (434, 96.2%) disagreed overall with the statement that “Students who are smart do not need to put forth effort.” Several teachers (237, 52.5%) strongly disagreed, 156 (34.6%) teachers disagreed, and 41 (9.1%) somewhat disagreed. Although the overall agreement with the statement was 17 teachers (3.8%), no one (zero teachers, 0%) strongly agreed that students who are smart do not need to put forth effort. There were 14 teachers (3.1%) who somewhat agreed and three teachers (0.7%) who agreed with that statement.

“Students are motivated when they see themselves as learners” was a statement agreed to overall by 432 (95.9%) of the respondents. Teachers who strongly agreed with statement numbered 141 (31.3%), 215 (47.7%) agreed, and 76 (16.9%) somewhat agreed. Teachers with an overall disagreement numbered 19 (4.2%), 12 (2.7%) somewhat disagreed, six (1.3%) disagreed, and one (0.2%) strongly disagreed.

Teachers who overall agreed that incentives produce learning just as engagement produces learning numbered 355 (78.7%). Breaking the overall apart found that 35 teachers (7.8%) strongly agreed, 135 (29.9%) agreed, and 185 (41.0%) somewhat agreed. Of the overall 96 teachers (21.2%) who disagreed, 48 teachers (10.6) somewhat disagreed, 42 (9.3%) disagreed, and six (1.3%) strongly disagreed.

When given the statement that "it is important for students to help create learning goals," 419 teachers (92.8%) overall agreed. Of the 419 teachers who agreed, 121 (26.8%) strongly agreed, 195 (43.2%) agreed, and 103 (22.8%) somewhat agreed. There were 32 teachers who disagreed that it is important for students to help create learning goals, with 23 (5.1%) who somewhat disagreed, five (1.1%) disagreed, and four (0.9%) strongly disagreed.

"Letter grades offer the incentive for students to learn," was overall agreed to by 313 teachers (69.4%). Those teachers who somewhat agreed totaled 214 teachers (47.5%), 83 teachers (18.4%) agreed, and 16 teachers (3.5%) strongly agreed. Those teachers who somewhat agreed totaled 77 (17.1%), 50 teachers (11.1%) disagreed, and 11 (2.4%) teachers strongly disagreed.

When given the statement "Parents view report card grades as how well their child is achieving," 441 teachers (97.8%) were in overall agreement. Of those who agreed, 128 (28.4%) strongly agreed, 268 (59.4%) agreed, and 45 (10.0%) somewhat agreed. Ten teachers (2.2%) were in overall disagreement, five (1.1%) somewhat disagreed, four (0.9%) disagreed, and one (0.2%) strongly disagreed.

Do teachers see test scores as accurate measures of student achievement? The statement was agreed to by 145 teachers (32.1%) overall, one teacher (0.2%) strongly agreed, 13 (2.9%) teachers agreed, and 131 (29.0%) somewhat agreed. Disagreeing with the statement overall were

306 teachers (67.9%). Of those who disagreed, 119 teachers (26.4%) somewhat disagreed, 111 teachers (24.6%) disagreed, and 76 teachers (16.9%) strongly disagreed.

"Formative, ongoing assessments are key elements of instruction" was a statement agreed to by 408 (90.4%) teachers. Strongly agreed was noted by 135 teachers (29.9%), 189 teachers (41.9%) agreed, and 84 teachers (18.6%) somewhat agreed. Overall 43 teachers (9.5%) disagreed with importance of formative assessment. Twenty-two teachers (4.9%) somewhat disagreed, 16 teachers (3.5%) disagreed, and five (1.1%) strongly disagreed.

Teachers (373, 82.7%) were overall in agreement that "parents in my class know the learning goals of their child." Of those who agreed, 42 (9.3%) strongly agreed, 175 (38.8%) agreed, and 156 (34.6%) somewhat agreed. Overall 78 (17.3%) teachers disagreed with this statement, 50 (11.1%) somewhat disagreed, 23 (5.1%) disagreed, and five (1.1%) strongly disagreed.

Overall, 314 teachers (69.6%) teachers agreed that "report card grades reflect academic achievement, effort, behavior, and motivation." Teachers who strongly agreed made up 36 (8.0%) of the teachers who responded, 126 teachers (27.9%) agreed, and 152 teachers (33.7%) somewhat agreed. Of the 137 teachers (30.4%) who disagreed, 74 teachers (16.4%) somewhat disagreed, 44 teachers (9.8%) disagreed, and 19 teachers (4.2%) strongly disagreed.

Approximately three-fourths (335, 74.3%) of teachers who responded agreed that students are allowed to redo assignments or assessments without penalty. Thirty-three teachers (7.3%) strongly agreed, 151 teachers (33.5%) agreed, and 151 teachers (33.5%) somewhat agreed. Of those 116 teachers (25.7%) who disagreed, 68 teachers (15.1%) somewhat disagreed, 42 teachers (9.3%) disagreed, and six teachers (1.3%) strongly disagreed.

"Grades allow parents to clearly understand and support the learning process" was a statement 260 teachers (57.7%) agreed with overall. Twelve teachers (2.7%) strongly agreed, 90 teachers (20.0%) agreed, and 158 teacher (35.0%) somewhat agreed. Ninety-nine teachers (22.0%) somewhat disagreed with the statement about grades, 68 teachers (15.1%) disagreed, and 24 teachers (5.3%) strongly disagreed.

What did teachers answer to the statement "Parents support educational opportunities for their child(ren) outside of the school day?" Overall agreement was noted by 286 teachers (62.4%), 14 teachers (3.1%) were in strong agreement, 71 teachers (15.7%) were in agreement, and 201 teachers (44.6%) were in some agreement. Overall disagreement was noted by 165 teachers (36.7%), 104 teachers (23.1%) were in some disagreement, 49 teachers (10.9%) were in disagreement, and 12 teachers (2.7%) were in strong disagreement.

The final three questions in the survey yielded demographic information as reported by respondents. For these three questions, one respondent did not answer which caused the population of the survey to be minus one respondent ($N = 450$, 0.2%). Teachers in Grades K-5 who responded to the survey were split as to the type of reporting system used in their building, 217 (48.1%) used a traditional report card and 233 (51.7%) used a standards-based report card. When asked how many years they had used this type of report card, 384 (85.1%) had used their systems for three years or more; 66 (14.6%) used their systems less than three years. The number of students in the building using free/reduced lunch was the final question, with above 50% reported by 230 teachers (51.0%), 35%-50% reported by 129 teachers (28.6%), and below 35% reported by 91 teachers (20.2%).

Answers of the respondents were then coded by the three demographic questions in order to disaggregate information provided by the demographics reported. The first of the three tables

answers "which type of reporting system (usually referred to as report card) is used in your building?" The number of respondents who reported traditional was 217 (48.1%). The majority of teachers (N = 201, 92.6%) reported using a traditional report card equal to or greater than three years and the rest of the teachers (N = 16, 7.4%) reported using traditional report cards fewer than three years. Teachers (N = 121, 55.8%) who used traditional report cards reported students who had free/reduced lunch as above 50%, 56 teachers (25.8%) reported 35%-50% free/reduced lunch, and 40 teachers (18.4%) reported fewer than 35% of students had free/reduced lunch.

Descriptive Statistics Traditional Reporting System

Table 2 contains the frequency data for those respondents in schools with traditional reporting systems with items addressing Parent Communication. The top responses by frequency were in agreement with, "Parents care about the education of their child(ren)" (N = 112, 51.6%). "Formative, ongoing assessments are key elements of instruction" (N = 93, 42.9%) was another statement with strong frequency in the agreement column. When looking at the entirety of agreement (combining somewhat agree, agree, and strongly agree) these two responses were also the strongest, respectively (N = 204, 94%; N = 190, 87.6%). Respondents overall disagreed with, "Test scores are accurate measures of student achievement" (N = 143, 65.9%), which was a statement with which Kohn (2011) and O'Connor and Wormelli (2011) also disagreed. "Parents support educational opportunities for their child(ren) outside of the school day" is a statement teachers who used traditional report cards were most strongly in the "somewhat" category for agreed (N = 95, 43.8%) and for disagreed (N = 52, 24.0%). Teachers who responded to this statement did not offer strong responses either way on whether parents supported educational opportunities for their children.

Table 2

Traditional Reporting Systems – Parent Communication

Statement	Strongly Disagree *N* (%)	Disagree *N* (%)	Somewhat Disagree *N* (%)	Somewhat Agree *N* (%)	Agree *N* (%)	Strongly Agree *N* (%)
Parents care about the education of their child(ren).	2 (.9%)	5 (2.3%)	6 (2.8%)	51 (23.5%)	112 (51.6%)	41 (18.9%)
Formative, ongoing assessments are key elements of instruction.	5 (2.3%)	10 (4.6%)	12 (5.5%)	3 8 (17.5%)	93 (42.9%)	59 (27.2%)
Parents support educational opportunities for their child(ren) outside of the school day.	9 (4.1%)	24 (11.1%)	52 (24.0%)	95 (43.8%)	30 (13.8%)	7 (3.2%)
Test scores are accurate measures of student achievement.	39 (18.0%)	54 (24.9%)	50 (23.0%)	68 (31.3%)	6 (2.8%)	0 (0%)

When compared to the whole sample (Table 3), the respondents who used traditional reporting systems were more tightly grouped around the mean for Parent Communication (M = 4.49, SD = .68) than for the whole sample (M = 4.56, SD = .63). The standard deviation also indicated there was more variety in the responses in the area of Parent Communication for those using traditional report cards than for the whole sample (Table 3). There were 217 teachers using traditional report cards offering responses for Parent Communication, with 451 teachers responding overall.

Table 3

Means for Using Traditional Report Cards – Parent Communication

Item	*N*	Whole Sample *M*	Whole Sample *SD*	*N*	Traditional *M*	Traditional *SD*
Parent Communication	451	4.56	.63	217	4.49	.68

Table 4 contains the frequency data for those respondents in schools with standards-based reporting systems with items addressing Parent Communication. The top responses by frequency were in agreement with, "Parents care about the education of their child(ren)" (*N* = 134, 57.5%). The second highest responses by frequency were somewhat agree (*N* = 106, 45.5%) to "Parents support educational opportunities for their child(ren) outside of the school day." "Formative, ongoing assessments are key elements of instruction," (*N* = 93, 42.9%) was a statement with strong frequency when agree (*N* = 96, 41.2%) and strongly agree (*N* = 75, 32.2%) columns were combined. Respondents overall disagreed with a statement that was negatively coded, "Test scores are accurate measures of student achievement" (*N* = 143, 65.9%). This is a statement with which Kohn (2011) and O'Connor and Wormelli (2011) also disagreed. When compared to the whole sample, the whole group respondents were more tightly grouped around the mean for Parent Communication (*M* = 4.56, *SD* = .63) than those who used standards-based reporting systems (*M* = 4.63, *SD* = .57). The standard deviation also indicated there was more variety in the responses for the whole sample than for standards-based respondents in Parent Communication.

Table 4

Standards-Based Reporting Systems – Parent Communication

Statement	Strongly Disagree *N* (%)	Disagree *N* (%)	Somewhat Disagree *N* (%)	Somewhat Agree *N* (%)	Agree *N* (%)	Strongly Agree *N* (%)
Parents care about the education of their child(ren).	4 (1.7%)	2 (.9%)	8 (3.4%)	40 (17.2%)	134 (57.5%)	45 (19.3%)
Formative, ongoing assessments are key elements of instruction.	0 (.0%)	6 (2.6%)	10 (4.3%)	46 (19.7%)	96 (41.2%)	75 (32.2%)
Parents support educational opportunities for their child(ren) outside of the school day.	3 (1.3%)	25 (10.7%)	51 (21.9%)	106 (45.5%)	41 (17.6%)	7 (3.0%)
Test scores are accurate measures of student achievement.	36 (15.5%)	57 (24.5%)	69 (29.6%)	63 (27.0%)	7 (3.0%)	1 (.4%)

When comparing standards-based and traditional reporting systems in the area of parent communication (Table 5), standards-based respondents ($N = 154$, 66.1%) reported agreeing with parent support for educational opportunities for their children outside the school day. This was higher than those who used traditional report cards ($N = 132$, 60.8%). Also, comparing standards-based and traditional reporting systems in the area of parent communication,

standards-based respondents (*N* = 217, 93.1%) reported they agreed with formative, ongoing assessments being key elements of instruction more than those using traditional report cards (*N* = 190, 87.6%).

Table 5

Means for Using Standards-Based Reporting Systems – Parent Communication

Item	*N*	*M* Whole Sample	*SD* Whole Sample	*N*	*M* Standards-Based	*SD* Standards-Based
Parent Communication	451	4.56	.63	233	4.63	.57

Table 6 contains the frequency data for those respondents in schools with traditional reporting systems with items addressing Teacher Communication. The top response by frequency was somewhat in agreement with, "Letter grades offer the incentive for students to learn" (*N* = 104, 47.9%). When looking at the entirety of agreement (which combined somewhat agree, agree, and strongly agree), the strongest response (*N* = 199, 91.7%) was for "Feedback on a student's work is more helpful to students than a letter/ number grade." When compared to the whole sample (Table 7), the respondents who used traditional reporting systems were similar between the mean for teacher communication (*M* = 3.83, *SD* = .57) and the whole sample (*M* = 3.85, *SD* = .55).

Table 6

Traditional Reporting Systems – Teacher Communication

Statement	Strongly Disagree *N* (%)	Disagree *N* (%)	Somewhat Disagree *N* (%)	Somewhat Agree *N* (%)	Agree *N* (%)	Strongly Agree *N* (%)
Feedback on a student's work is more helpful to students than a letter/ number grade.	3 (1.4%)	4 (1.8%)	11 (5.1%)	57 (26.3%)	85 (39.2%)	57 (26.3%)
Report card grades reflect academic achievement, effort, behavior, and motivation.	10 (4.6%)	20 (9.2%)	48 (22.1%)	81 (37.3%)	48 (22.1%)	10 (4.6%)
Letter grades offer the incentive for students to learn.	6 (2.8%)	23 (10.6%)	39 (18.0%)	104 (47.9%)	37 (17.1%)	8 (3.7%)
Grades allow parents to clearly understand and support the learning process.	16 (7.4%)	35 (16.1%)	40 (18.4%)	89 (41.0%)	33 (15.2%)	4 (1.8%)

Table 7

Means for Using Traditional Reporting Systems – Teacher Communication

Item	*N*	*M* Whole Sample	*SD* Whole Sample	*N*	*M* Traditional	*SD* Traditional
Teacher Communication	451	3.85	.55	217	3.83	.57

Table 8 contains the frequency data for those respondents in schools with standards-based reporting systems with items addressing Teacher Communication. The top response by frequency was in agreement with, "Letter grades offer the incentive for students to learn" (*N* = 110, 47.2%). "Feedback on a student's work is more helpful to students than a letter/ number grade" (*N* = 214, 91.8%) was a statement with strong frequency when combined with somewhat agree (*N* = 53, 22.7%), agree (*N* = 92, 39.5%), and strongly agree (*N* = 69, 29.6%).

When comparing standards-based and traditional reporting systems in the area of parent communication, standards-based respondents (*N* = 214, 91.8%) and traditional respondents (*N* = 199, 91.7%) both reported overall agreement that feedback on a student's work is more helpful to students than a letter/number grade. The next highest overall response set, a combination of somewhat agree, agree, and strongly agree, was regarding the statement about report card grades reflect academic achievement, effort, behavior and motivation. Standards-based report card users (*N* = 175, 75.1%) reported agree for report card grades reflect academic achievement, effort, behavior, and motivation. Traditional report card users also agreed overall, but not as strongly (*N* = 139, 64.1%).

Table 8

Standards-Based Reporting Systems – Teacher Communication

Statement	Strongly Disagree *N* (%)	Disagree *N* (%)	Somewhat Disagree *N* (%)	Somewhat Agree *N* (%)	Agree *N* (%)	Strongly Agree *N* (%)
Feedback on a student's work is more helpful to students than a letter/ number grade.	4 (1.7%)	5 (2.1%)	10 (4.3%)	53 (22.7%)	92 (39.5%)	69 (29.6%)
Report card grades reflect academic achievement, effort, behavior, and motivation.	8 (3.4%)	24 (10.3%)	26 (11.2%)	71 (30.5%)	78 (33.5%)	26 (11.2%)
Letter grades offer the incentive for students to learn.	5 (2.1%)	26 (11.2%)	38 (16.3%)	110 (47.2%)	46 (19.7%)	8 (3.4%)
Grades allow parents to clearly understand and support the learning process.	8 (3.4%)	32 (13.7%)	59 (25.3%)	69 (29.6%)	57 (24.5%)	8 (3.4%)

Note in Table 9, when compared to the whole sample, the whole group respondents (M = 3.85, SD = .55) were similar to the mean for Parent Communication for those using a standards-

based report card (M = 3.87, SD = .52). When compared to the whole sample, the whole group respondents (M = 3.85, SD = .55) were similar to the mean for Parent Communication for those using a standards-based report card (M = 3.87, SD = .52) as reflected in Table 9. Responding to the survey regarding standards-based reporting and teacher communication were 217 teachers.

Table 9

Means for Using Standards-Based Reporting Systems – Teacher Communication

Item	*N*	*M* Whole Sample	*SD* Whole Sample	*N*	*M* Standards-Based	*SD* Standards-Based
Teacher Communication	451	3.85	.55	233	3.87	.52

Table 10 contains the frequency data for respondents in schools with traditional reporting systems who addressed items of Student Mindset. The top responses by frequency were in strong agreement (N = 129, 59.4%) with, "the expectations of the teacher influence the achievement of his/her students." "Students are motivated when they see themselves as learners" had the next highest response with respondents (N = 112, 51.6%) who agreed. When looking at the entirety of agreement (combined somewhat agree, agree, and strongly agree) these two responses were the strongest also, respectively (N = 212, 97.7%; N = 208, 95.9%), along with "it is important for students to help create learning goals" (N = 201, 92.6%).

Table 10

Traditional Reporting Systems – Mindset

Statement	Strongly Disagree *N* (%)	Disagree *N* (%)	Somewhat Disagree *N* (%)	Somewhat Agree *N* (%)	Agree *N* (%)	Strongly Agree *N* (%)
The process of learning is more fascinating than the content of learning.	0 (0%)	13 (6.0%)	38 (17.5%)	56 (25.8%)	92 (42.4%)	18 (8.3%)
The expectations of the teacher influence the achievement of his/ her students.	2 (.9%)	0 (0%)	3 (1.4%)	12 (5.5%)	71 (32.7%)	129 (59.4%)
Looking 'smart' to peers is important to student learning.	3 (1.4%)	29 (13.4%)	31 (14.3%)	90 (41.5%)	54 (24.9%)	10 (4.6%)
Students are motivated when they see themselves as learners.	0 (0%)	3 (1.4%)	6 (2.8%)	42 (19.4%)	112 (51.6%)	54 (24.9%)
It is important for students to help create learning goals.	2 (.9%)	4 (1.8%)	10 (4.6%)	54 (24.9%)	95 (43.8%)	52 (24.0%)
Incentives produce learning just as engagement produces learning.	1 (.5%)	23 (10.6%)	23 (10.6%)	84 (38.7%)	71 (32.7%)	15 (6.9%)

When compared to the whole sample (Table 11), the respondents who used traditional reporting systems were similar between the mean for Student Mindset ($M = 4.38$, $SD = .46$) and the whole sample ($M = 4.43$, $SD = .47$). The standard deviation also indicated there was minimal variety in the responses in the area of Student Mindset for traditional report cards and for the whole sample. There were 217 teachers who worked in schools with Traditional reporting and responded to the mindset questions.

Table 11

Means for Traditional Reporting Systems – Mindset

Item	*N*	*M* Whole Sample	*SD* Whole Sample	*N*	*M* Traditional	*SD* Traditional
Mindset	451	4.43	.47	217	4.38	.46

Table 12 contains the frequency data for those respondents in schools with standards-based reporting systems with items addressing Student Mindset. The top responses by frequency agreed with, "The expectations of the teacher influence the achievement of his/ her students" ($N = 145$, 62.2%). The second highest responses by frequency was "somewhat agree" ($N = 116$, 49.8%) to "Looking 'smart' to peers is important to student learning." Three statements demonstrated strong frequency when somewhat agree, agree, and strongly agree were combined; (a) expectations of the teacher influence achievement of students ($N = 228$, 97.9%), (b) students are motivated when they see themselves as learners ($N = 223$, 95.7%), and (c) it is important for students to help create learning goals ($N = 218$, 93.6%).

Table 12

Standards-Based Reporting Systems – Mindset

Statement	Strongly Disagree *N* (%)	Disagree *N* (%)	Somewhat Disagree *N* (%)	Somewhat Agree *N* (%)	Agree *N* (%)	Strongly Agree *N* (%)
The process of learning is more fascinating than the content of learning.	1 (.4%)	7 (3.0%)	21 (9.0%)	86 (36.9%)	83 (35.6%)	35 (15.0%)
The expectations of the teacher influence the achievement of his/ her students.	1 (.4%)	1 (.4%)	3 (1.3%)	17 (7.3%)	66 (28.3%)	145 (62.2%)
Looking 'smart' to peers is important to student learning.	4 (1.7%)	29 (9.4%)	30 (12.9%)	116 (49.8%)	52 (22.3%)	9 (3.9%)
Students are motivated when they see themselves as learners.	1 (.4%)	3 (1.3%)	6 (2.6%)	34 (14.6%)	103 (44.2%)	86 (36.9%)
It is important for students to help create learning goals.	2 (.9%)	0 (0%)	13 (5.6%)	49 (21.0%)	100 (42.9%)	69 (29.6%)
Incentives produce learning just as engagement produces learning.	5 (2.1%)	19 (8.2%)	24 (10.3%)	101 (43.3%)	64 (27.5%)	20 (8.6%)

When compared to the whole sample (Table 13), the standards-based respondents (M = 4.48, SD = .47) were similarly grouped around the mean for Student Mindset for whole group (M = 4.43, SD = .47). The standard deviation also indicates there was the same variety in the responses for the whole sample and for standards-based respondents in Student Mindset. There were 233 teachers who worked in schools with standards-based reporting and responded to the mindset questions.

Table 13

Means for Standards-Based Reporting Systems – Mindset

Item	*N*	*M* Whole Sample	*SD* Whole Sample	*N*	*M* Standards-Based	*SD* Standards-Based
Mindset	451	4.43	.47	233	4.48	.47

Table 14 contains the frequency data for those respondents in schools with traditional reporting systems for items addressing student assessment. The top responses by frequency were in agreement with, "Students in my classroom know their learning targets" (learning goals) (N = 108, 49.8%). "Parents in my class know the learning goals of their child" (N = 84, 38.7%) was a statement with the second highest frequency, but in the somewhat agreed column. When looking at the entirety of agreement (combined somewhat agree, agree, and strongly agree), the responses for "students in my classroom know their learning targets" (learning goals) (N = 213, 98.1%) had the highest frequency.

Table 14

Traditional Reporting System – Assessments

Statement	Strongly Disagree *N* (%)	Disagree *N* (%)	Somewhat Disagree *N* (%)	Somewhat Agree *N* (%)	Agree *N* (%)	Strongly Agree *N* (%)
Students in my classroom know their learning targets (learning goals).	0 (0%)	1 (.5%)	3 (1.4%)	75 (34.6%)	108 (49.8%)	30 (13.8%)
Parents in my class know the learning goals of their child(ren).	3 (1.4%)	19 (8.8%)	30 (13.8%)	84 (38.7%)	72 (33.2%)	9 (4.1%)
Students are allowed to redo assignments/ assessments without penalty.	3 (1.4%)	30 (13.8%)	37 (17.1%)	64 (29.5%)	68 (31.3%)	15 (6.9%)

When compared to the whole sample (Table 15), the traditional respondents ($M = 4.26$, $SD = .71$) were more tightly grouped around the mean for Student Mindset for whole group ($M = 4.42$, $SD = .70$). The standard deviation also indicates there was the same variety in the responses for the whole sample ($M = 4.26$, $SD = .70$) and for traditional respondents ($M = 4.42$, $SD = .71$) in Student Mindset. There were 217 teachers who worked in schools with traditional reporting systems and responded to the Assessment questions.

Table 15

Means for Traditional Reporting System – Assessment

Item	*N*	*M* Whole Sample	*SD* Whole Sample	*N*	*M* Traditional	*SD* Traditional
Assessment	451	4.42	.70	217	4.26	.71

Table 16 contains the frequency data for those respondents in schools with standards-based reporting systems with items addressing Student Mindset. The top responses by frequency were in agreement with, "Students in my classroom know their learning targets (learning goals)" (*N* = 132, 56.7%). The second highest set of responses by frequency was agree (*N* = 103, 44.2%) for "Parents in my class know the learning goals of their child." The statement about students in the classroom know learning targets (learning goals) was a statement with strong frequency when combined with somewhat agree (*N* = 50, 21.5%), agree (*N* = 132, 56.7%) and strongly agree (*N* = 44, 18.9%) columns for an overall response (*N* = 226, 97%).

Table 16

Standards-Based Reporting System – Assessment

Statement	Strongly Disagree *N* (%)	Disagree *N* (%)	Somewhat Disagree *N* (%)	Somewhat Agree *N* (%)	Agree *N* (%)	Strongly Agree *N* (%)
Students in my classroom know their learning targets (learning goals).	1 (.4%)	3 (1.3%)	3 (1.3%)	50 (21.5%)	132 (56.7%)	44 (18.9%)
Parents in my class know the learning goals of their child.	2 (.9%)	4 (1.7%)	20 (8.6%)	71 (30.5%)	103 (44.2%)	33 (14.2%)
Students are allowed to redo assignments/ assessments without penalty.	3 (1.3%)	12 (5.2%)	31 (13.3%)	86 (36.8%)	83 (35.6%)	18 (7.7%)

When compared to the whole sample, the whole group respondents were more tightly grouped around the mean for Student Mindset ($M = 4.42$, $SD = .70$) than those who used standards-based reporting systems ($M = 4.57$, $SD = .66$) as presented in Table 17. The standard deviation also indicated there was more variety in the responses for the whole sample than for standards-based respondents in student mindset. There were 233 teachers who used standards-based reporting and responded to the Assessment questions.

Table 17

Means for Standards-Based Reporting Systems – Assessment

Item	*N*	*M* Whole Sample	*SD* Whole Sample	*N*	*M* Standards-Based	*SD* Standards-Based
Assessment	451	4.42	.70	233	4.57	.66

< 3 Years and ≥ 3 Years

Table 18 contains the frequency data for those teachers with less than three years' experience who responded to items that addressed Parent Communication. The top responses by frequency were in agreement with, "Parents care about the education of their child(ren)" (*N* = 36, 54.5%). "Parents support educational opportunities for their children outside the school day" (*N* = 31, 47.0%) was a statement with the second strongest frequency in the agreement column. When looking at the entirety of agreement (combined somewhat agree, agree, and strongly agree) parents caring about the education of their children (*N* = 62, 93.9%) led the frequency for teachers with < 3 years' experience, "formative, ongoing assessments are key elements of instruction" (*N* = 60, 90.9%) was the closest in frequency for parent communication. Respondents overall disagreed with, "Test scores are accurate measures of student achievement" (*N* = 48, 72.7%), which is a statement that was reverse-coded in the survey. Reverse coding of a statement meant that I expected the respondents to disagree with the statement.

Table 18

Frequency Data for Teachers with < 3 Years' Experience – Parent Communication

Statement	Strongly Disagree *N* (%)	Disagree *N* (%)	Somewhat Disagree *N* (%)	Somewhat Agree *N* (%)	Agree *N* (%)	Strongly Agree *N* (%)
Parents care about the education of their child(ren).	0 (0%)	0 (0%)	4 (6.1%)	14 (21.2%)	36 (54.5%)	12 (18.2%)
Formative, ongoing assessments are key elements of instruction.	1 (1.5%)	1 (1.5%)	4 (6.1%)	14 (21.2%)	29 (43.9%)	17 (25.8%)
Parents support educational opportunities for their child(ren) outside of the school day.	1 (1.5%)	9 (13.6%)	16 (24.2%)	31 (47.0%)	9 (13.6%)	0 (0%)
Test scores are accurate measures of student achievement.	13 (19.7%)	14 (21.2%)	21 (31.8%)	14 (21.2%)	3 (4.5%)	1 (1.5%)

When compared to the whole sample (Table 19), the respondents who had < 3 years' experience were more tightly grouped around the mean for parent communication ($M = 4.52$, $SD = .54$) than for the whole sample ($M = 4.56$, $SD = .63$). The standard deviation also indicated there was more variety in the responses in the area of parent communication than for the whole

sample than for those with < 3 years' experience. There were 66 teachers who worked in schools with < 3 years' experience and responded to the Parent Communication questions.

Table 19

Means for Teachers with < 3 Years' Experience – Parent Communication

Item	*N*	*M* Whole Sample	*SD* Whole Sample	*N*	*M* <3 years Experience	*SD* <3 years Experience
Parent Communication	451	4.56	.63	66	4.52	.54

Table 20 contains the frequency data for those teachers with ≥ 3 years' experience who responded to items that addressed Parent Communication. The top responses by frequency were in agreement, "Parents care about the education of their child(ren)" (*N* = 210, 54.7%). The second highest responses by frequency was "somewhat agree" (*N* = 170, 44.3%) to "Parents support educational opportunities for their child(ren) outside of the school day." The statements "Parents care about the education of their children" (*N* = 361, 94%) and "Formative, ongoing assessments are key elements of instruction" (*N* = 347, 90.4%), offered the strongest frequencies when scores for somewhat agree, agree, and strongly agree were combined. When somewhat disagree, disagree, and strongly disagree were combined, respondents disagreed with "Test scores are accurate measures of student achievement" (*N* = 257, 65.9%). As mentioned before, this was a reverse-coded statement with which Kohn (2011) and O'Connor and Wormelli (2011) also disagreed.

Table 20

Frequency Data for Teachers with ≥ 3 Years' Experience – Parent Communication

Statement	Strongly Disagree *N* (%)	Disagree *N* (%)	Somewhat Disagree *N* (%)	Somewhat Agree *N* (%)	Agree *N* (%)	Strongly Agree *N* (%)
Parents care about the education of their child(ren).	6 (1.6%)	7 (1.8%)	10 (2.6%)	77 (20.1%)	210 (54.7%)	74 (19.3%)
Formative, ongoing assessments are key elements of instruction.	4 (1.0%)	15 (3.9%)	18 (4.7%)	70 (18.2%)	160 (41.7%)	117 (30.5%)
Parents support educational opportunities for their child(ren) outside of the school day.	11 (2.9%)	40 (10.4%)	87 (22.7%)	170 (44.3%)	62 (16.1%)	14 (3.6%)
Test scores are accurate measures of student achievement.	62 (16.1%)	97 (25.3%)	98 (25.5%)	117 (30.5%)	10 (2.6%)	0 (0%)

When compared to the whole sample ($M = 4.56$, $SD = .63$), respondents with ≥ 3 years' experience were similarly grouped around the mean for Parent Communication ($M = 4.57$, $SD = .64$). The standard deviation also indicated there was almost no variety in the responses for the whole sample and for respondents with ≥ 3 years' experience in Parent Communication (Table 21). There were 384 teachers who worked in schools with ≥ 3 years' experience and responded to the Parent Communication questions.

Table 21

Means for Teachers with ≥ 3 Years' Experience – Parent Communication

Item	*N*	*M* Whole Sample	*SD* Whole Sample	*N*	*M* ≥3 years	*SD* ≥3 years
Parent Communication	451	4.56	.63	384	4.57	.64

Table 22 contains the frequency data for those teachers with < 3 years' experience who responded to items that addressed Teacher Communication. The top response by frequency was somewhat in agreement with, "Letter grades offer the incentive for students to learn" (*N* = 30, 45.5%). When looking at the entirety of agreement (somewhat agree, agree, and strongly agree combined), the strongest response (*N* = 59, 89.4%) was for "Feedback on a student's work is more helpful to students than a letter/number grade."

Table 22

Frequency Data for Teachers with < 3 Years' Experience – Teacher Communication

Statement	Strongly Disagree *N* (%)	Disagree *N* (%)	Somewhat Disagree *N* (%)	Somewhat Agree *N* (%)	Agree *N* (%)	Strongly Agree *N* (%)
Feedback on a student's work is more helpful to students than a letter/ number grade.	0 (0%)	1 (1.5%)	6 (9.1%)	16 (24.2%)	21 (31.8%)	22 (33.3%)
Report card grades reflect academic achievement, effort, behavior, and motivation.	4 (6.1%)	6 (9.1%)	6 (9.1%)	18 (27.3%)	23 (34.8%)	9 (13.6%)
Letter grades offer the incentive for students to learn.	2 (3.0%)	7 (10.6%)	14 (21.2%)	30 (45.5%)	10 (15.2%)	3 (4.5%)
Grades allow parents to clearly understand and support the learning process.	6 (9.1%)	6 (9.1%)	17 (25.8%)	19 (28.8%)	16 (24.2%)	2 (3.0%)

When compared to the whole sample (Table 23), the respondents with < 3 years' experience not as tightly grouped in the mean for teacher communication ($M = 3.93$, $SD = .60$) than for the whole sample ($M = 3.85$, $SD = .55$). The standard deviation indicated there was quite

a variety in the responses in the area of Teacher Communication for those teachers with < 3 years' experience and for the whole sample (Table 23). There were 66 teachers who worked in schools with < 3 years' experience and responded to the Teacher Communication questions.

Table 23

Means for Teachers with < 3 Years' Experience – Teacher Communication

Item	*N*	*M* Whole Sample	*SD* Whole Sample	*N*	*M* <3 years	*SD* <3 years
Teacher Communication	451	3.85	.55	66	3.93	.60

Table 24 contains the frequency data for those with ≥ 3 years' experience who responded to items that addressed Teacher Communication. The top response by frequency was somewhat agree with, "Letter grades offer the incentive for students to learn" (*N* = 184, 47.9%). "Feedback on a student's work is more helpful to students than a letter/number grade" (*N* = 156, 40.6%) was the statement with the second highest frequencies. When scores for somewhat agree (*N* = 94, 24.5%), agree (*N* = 156, 40.6%) and strongly agree (*N* = 104, 27.1%) were combined, the highest frequencies followed the statement "Feedback on a student's work is more helpful to students than a letter/number grade" (*N* = 354, 92.2%).

Table 24

Frequency Data for Teachers with ≥ 3 Years' Experience – Teacher Communication

Statement	Strongly Disagree N (%)	Disagree N (%)	Somewhat Disagree N (%)	Somewhat Agree N (%)	Agree N (%)	Strongly Agree N (%)
Feedback on a student's work is more helpful to students than a letter/ number grade.	7 (1.8%)	8 (2.1%)	15 (3.9%)	94 (24.5%)	156 (40.6%)	104 (27.1%)
Report card grades reflect academic achievement, effort, behavior, and motivation.	14 (3.6%)	38 (9.9%)	68 (17.7%)	134 (34.9%)	103 (26.8%)	27 (7.0%)
Letter grades offer the incentive for students to learn.	9 (2.3%)	42 (10.9%)	63 (16.4%)	184 (47.9%)	73 (19.0%)	13 (3.4%)
Grades allow parents to clearly understand and support the learning process.	18 (4.7%)	61 (15.9%)	82 (21.4%)	139 (36.2%)	74 (19.3%)	10 (2.6%)

When compared to the whole sample, the whole group respondents (M = 3.85, SD = .55) were similar (Table 25) to the mean for Teacher Communication for those with ≥ 3 years' experience (M = 3.84, SD = .54). The standard deviation indicated there was minimal variety in the responses in the area of Teacher Communication for those teachers with ≥ 3 years'

experience and for the whole sample (Table 25). There were 66 teachers who worked in schools with ≥ 3 years' experience and responded to the Teacher Communication questions.

Table 25

Means for Teachers with ≥ 3 Years' Experience – Teacher Communication

Item	*N*	*M* Whole Sample	*SD* Whole Sample	*N*	*M* ≥3 years	*SD* ≥3 years
Teacher Communication	451	3.85	.55	384	3.84	.54

Table 26 contains the frequency data for those with < 3 years' experience who responded to items about student mindset. The top responses by frequency were in strong agreement (*N* = 39, 59.1%), "The expectations of the teacher influence the achievement of his/her students." Respondents agreed with "Looking 'smart' to peers is important to student learning" had the next highest response (*N* = 30, 45.5%). When looking at the entirety of agreement (somewhat agree, agree, and strongly agree were combined), the response regarding the expectations of the teacher influencing the achievement of students was the strongest (*N* = 65, 98.5%). The next highest frequencies when all agreement options were combined were "Students are motivated when they see themselves as learners" (*N* = 62, 93.9%), along with "It is important for students to help create learning goals" (*N* = 61, 93.4%).

Table 26

Frequency Data for Teachers with < 3 Years' Experience – Mindset

	Strongly Disagree *N* (%)	Disagree *N* (%)	Somewhat Disagree *N* (%)	Somewhat Agree *N* (%)	Agree *N* (%)	Strongly Agree *N* (%)
The process of learning is more fascinating than the content of learning.	0 (0%)	3 (4.5%)	9 (13.6%)	22 (33.3%)	24 (36.4%)	8 (12.1%)
The expectations of the teacher influence the achievement of his/ her students.	0 (0%)	0 (0%)	1 (1.5%)	4 (6.1%)	22 (33.3%)	39 (59.1%)
Looking 'smart' to peers is important to student learning.	1 (1.5%)	10 (15.2%)	8 (12.1%)	30 (45.5%)	15 (22.7%)	2 (3.0%)
Students are motivated when they see themselves as learners.	0 (0%)	2 (3.0%)	2 (3.0%)	12 (18.2%)	26 (39.4%)	24 (36.0%)
It is important for students to help create learning goals.	0 (0%)	1 (1.5%)	4 (6.1%)	16 (24.2%)	28 (42.4%)	17 (25.8%)
Incentives produce learning just as engagement produces learning.	1 (1.5%)	4 (6.1%)	6 (9.1%)	24 (36.4%)	23 (34.8%)	8 (12.1%)

When compared to the whole sample, those teachers with < 3 years' experience were more tightly clustered for the mean for student mindset ($M = 4.37$, $SD = .46$) than for the whole sample ($M = 4.43$, $SD = .47$). The standard deviation indicated there was minimal variety in the responses in the area of student mindset for those teachers with < 3 years' experience and for the whole sample (Table 27). There were 66 teachers who worked in schools with < 3 years' experience and responded to the mindset questions.

Table 27

Mean for Teachers with < 3 Years' Experience – Mindset

Item	*N*	*M* Whole Sample	*SD* Whole Sample	*N*	*M* <3 years	*SD* <3 years
Mindset	451	4.43	.47	66	4.37	.46

Table 28 contains the frequency data for those with ≥3 years' experience who responded to items that addressed Student Mindset. The top responses by frequency were in agreement with, "The expectations of the teacher influence the achievement of his/her students" ($N = 235$, 61.2%). The second highest responses by frequency was in "agree" ($N = 189$, 49.2%) to "Students are motivated when they see themselves as learners." Three statements demonstrated strong frequency when somewhat agree, agree, and strongly agree scores were combined; (a) expectations of the teacher influence achievement of students ($N = 374$, 97.4%), (b) students are motivated when they see themselves as learners ($N = 369$, 96.1%), and (c) it is important for students to help create learning goals ($N = 358$, 93.2%).

Table 28

Frequency Data for Teachers with ≥ 3 Years' Experience – Mindset

Statement	Strongly Disagree *N* (%)	Disagree *N* (%)	Somewhat Disagree *N* (%)	Somewhat Agree *N* (%)	Agree *N* (%)	Strongly Agree *N* (%)
The process of learning is more fascinating than the content of learning.	1 (.3%)	17 (4.4%)	50 (13.0%)	120 (31.3%)	151 (39.3%)	45 (11.7%)
The expectations of the teacher influence the achievement of his/ her students.	3 (.8%)	1 (.3%)	5 (1.3%)	25 (6.5%)	115 (29.9%)	235 (61.2%)
Looking 'smart' to peers is important to student learning.	6 (1.6%)	41 (10.7%)	53 (13.8%)	176 (45.8%)	91 (23.7%)	17 (4.4%)
Students are motivated when they see themselves as learners.	1 (.3%)	4 (1.0%)	10 (2.6%)	64 (16.7%)	189 (49.2%)	116 (30.2%)
It is important for students to help create learning goals.	4 (1.0%)	3 (.8%)	19 (4.9%)	87 (22.7%)	167 (43.5%)	104 (27.1%)
Incentives produce learning just as engagement produces learning.	5 (1.3%)	38 (9.9%)	41 (10.7%)	161 (41.9%)	112 (29.2%)	27 (7.0%)

When compared to the whole sample (Table 29), the respondents with ≥ 3 years' experience (M = 4.44, SD = .47) were similarly grouped around the mean for Student Mindset with the whole group (M = 4.43, SD = .47). The standard deviation also indicated there was the same variety in the responses for the whole sample and for those with ≥ 3 years' experience in the area of Student Mindset. There were 384 teachers who worked in schools with ≥ 3 years' experience and responded to the mindset questions.

Table 29

Means for Teachers With ≥ 3 Years' Experience – Mindset

Item	*N*	*M* Whole Sample	*SD* Whole Sample	*N*	*M* ≥ 3 years	*SD* ≥ 3 years
Mindset	451	4.43	.47	384	4.44	.47

Table 30 contains the frequency data for those teachers with < 3 years' experience who responded to items that addressed student assessment. The top responses by frequency were in agreement with, "Students in my classroom know their learning targets" (learning goals) (N = 41, 62.1%). "Students are allowed to redo assignments/assessments without penalty" (N = 30, 45.5%) had the second highest frequency of somewhat agree. When looking at the entirety of agreement (somewhat agree, agree, and strongly agree scores were combined), the responses for "Students in my classroom know their learning targets" (learning goals) (N = 65, 98.5%) had the highest frequency.

Table 30

Frequency Data for Teachers with < 3 Years' Experience – Assessment

	Strongly Disagree *N* (%)	Disagree *N* (%)	Somewhat Disagree *N* (%)	Somewhat Agree *N* (%)	Agree *N* (%)	Strongly Agree *N* (%)
Students in my classroom know their learning targets (learning goals).	0 (0%)	1 (1.5%)	0 (0%)	14 (21.2%)	41 (62.1%)	10 (15.2%)
Parents in my class know the learning goals of their child.	2 (3.0%)	3 (4.5%)	7 (10.6%)	20 (30.3%)	29 (43.9%)	5 (7.6%)
Students are allowed to redo assignments/ assessments without penalty.	2 (3.0%)	5 (7.6%)	9 (13.6%)	30 (45.5%)	14 (21.2%)	6 (9.1%)

When compared to the whole sample (Table 31), teachers with < 3 years' experience (M = 4.40, SD = .67) were very similarly grouped around the mean for Assessment for whole group (M = 4.42, SD = .70). The standard deviation also indicated there was some variety in the responses for the whole sample (M = 4.42, SD = .70) and for respondents with < 3 years' experience (M = 4.40, SD = .67) in the area of Assessment. There were 66 teachers who worked in schools with < 3 years' experience and responded to the student assessment questions.

Table 31

Means for Teachers with < 3 Years' Experience – Assessment

Item	*N*	*M* Whole Sample	*SD* Whole Sample	*N*	*M* < 3 years	*SD* < 3 years
Assessment	451	4.42	.70	66	4.40	.67

Table 32 contains the frequency data for those teachers with ≥ 3 years' experience who responded to items that addressed Assessment. The top responses by frequency were in agreement with, "Students in my classroom know their learning targets" (learning goals) (*N* = 199, 51.8%). The second highest set of responses by frequency was agreement (*N* = 146, 38.0%) to "Parents in my class know the learning goals of their child." The statement about students in the classroom knowing learning targets (learning goals) was a statement with strong frequency when combined with somewhat agree (*N* = 111, 28.9%), agree (*N* = 199, 51.8%) and strongly agree (*N* = 64, 16.7%) with an overall response (*N* = 374, 97.4%).

Table 32

Frequency Data for Teachers with ≥ 3 Years' Experience – Assessment

Statement	Strongly Disagree *N* (%)	Disagree *N* (%)	Somewhat Disagree *N* (%)	Somewhat Agree *N* (%)	Agree *N* (%)	Strongly Agree *N* (%)
Students in my classroom know their learning targets (learning goals).	1 (.3%)	3 (.8%)	6 (1.6%)	111 (28.9%)	199 (51.8%)	64 (16.7%)
Parents in my class know the learning goals of their child.	3 (.8%)	20 (5.2%)	43 (11.2%)	135 (35.2%)	146 (38.0%)	37 (9.6%)
Students are allowed to redo assignments/ assessments without penalty.	4 (1.0%)	37 (9.6%)	59 (15.4%)	120 (31.3%)	137 (35.7%)	27 (7.0%)

When compared to the whole sample (Table 33), the whole group respondents ($M = 4.42$, $SD = .70$) and the respondents with ≥ 3 years' experience ($M = 4.42$, $SD = .71$) were tightly grouped around the mean for Assessment. The standard deviation also indicated there was little variety in the responses for the whole sample and for respondents with ≥ 3 years' experience in the area of assessment. There were 384 teachers who worked in schools with ≥ 3 years' experience who responded to the Assessment questions.

Table 33

Means for Teachers with ≥ 3 Years' Experience – Assessment

Item	*N*	*M* Whole Sample	*SD* Whole Sample	*N*	*M* ≥3 years	*SD* ≥3 years
Assessment	451	4.42	.70	384	4.42	.71

Free/Reduced Lunch

Table 34 contains the frequency data for those respondents in schools with < 35% free/reduced lunch for items addressing Parent Communication. The top responses by frequency were in agreement with, "Parents care about the education of their child(ren)" (*N* = 51, 56.0%). "Parents support educational opportunities for their child(ren) outside of the school day" (*N* = 47, 51.6%) was a statement with the second highest frequency, but was in the somewhat agree column. When looking at the entirety of agreement (somewhat agree, agree, and strongly agree combined), the strongest responses were to "Parents care about the education of their children" (*N* = 86, 94.5%) and "Formative, ongoing assessments are key elements of instruction" (*N* = 84, 92.3%). Respondents overall disagreed (strongly disagree, disagree, and somewhat disagree combined) with, "Test scores are accurate measures of student achievement" (*N* = 53, 58.2%), which was a statement with which Kohn (2011) and O'Connor and Wormelli (2011) also disagreed. This is because the statement as presented to respondents was reverse-coded, or a statement made in the opposite of the research cited.

Table 34

Frequency Data for Free/Reduced Lunch – Parent Communication

Statement	Strongly Disagree *N* (%)	Disagree *N* (%)	Somewhat Disagree *N* (%)	Somewhat Agree *N* (%)	Agree *N* (%)	Strongly Agree *N* (%)
Parents care about the education of their child(ren).	1 (1.1%)	1 (1.1%)	3 (3.3%)	7 (7.7%)	51 (56.0%)	28 (30.8%)
Formative, ongoing assessments are key elements of instruction.	1 (1.1%)	0 (0%)	6 (6.6%)	15 (16.5%)	34 (37.4%)	35 (38.5%)
Parents support educational opportunities for their child(ren) outside of the school day.	0 (0%)	7 (7.7%)	8 (8.8%)	47 (51.6%)	23 (25.3%)	6 (6.6%)
Test scores are accurate measures of student achievement.	8 (8.8%)	18 (19.8%)	27 (29.7%)	33 (36.3%)	4 (4.4%)	1 (1.1%)

When compared to the whole sample (Table 35), the respondents for the whole sample ($M = 4.56$, $SD = .63$) were more tightly grouped around the mean for Parent Communication than were those with < 35% free/reduced lunch ($M = 4.79$, $SD = .59$). The standard deviation also indicated there was more variety in the responses in the area of Parent Communication for those in the whole sample than for those with < 35% free/reduced lunch. There were 91 teachers

who worked in schools with < 35% free/reduced lunch who responded to the assessment questions.

Table 35

Means for Free/Reduced Lunch – Parent Communication

Item	*N*	*M* Whole Sample	*SD* Whole Sample	*N*	*M* Parent Communication	*SD* Parent Communication
<35% Free/ Reduced	451	4.56	.63	91	4.79	.59

Table 36 contains the frequency data for those respondents in schools with ≥ 50% free/reduced lunch for items addressing Parent Communication. The top responses by frequency were in agreement with, "Parents care about the education of their child(ren)" (*N* = 116, 50.4%). The second highest responses by frequency was agree (*N* = 103, 44.8%) for "Formative, ongoing assessments are key elements of instruction." "Parents care about the education of their child(ren)" (*N* = 212, 92.8%) was a statement with strong frequency when combined with somewhat agree (*N* = 62, 27%), agree (*N* = 116, 50.4%) and strongly agree (*N* = 34, 14.8%). Respondents overall disagreed (strongly disagree, disagree, and somewhat disagree combined) with, "Test scores are accurate measures of student achievement" (*N* = 162, 70.4%), which is a statement with which Kohn (2011) and O'Connor and Wormelli (2011) also disagreed. This is because the statement as presented to respondents was reverse-coded, or a statement made in the opposite of the research cited.

Table 36

Frequency Data for ≥ 50% Free/ Reduced Lunch – Parent Communication

Statement	Strongly Disagree *N* (%)	Disagree *N* (%)	Somewhat Disagree *N* (%)	Somewhat Agree *N* (%)	Agree *N* (%)	Strongly Agree *N* (%)
Parents care about the education of their child(ren).	4 (1.7%)	6 (2.6%)	8 (3.5%)	62 (27.0%)	116 (50.4%)	34 (14.8%)
Formative, ongoing assessments are key elements of instruction.	2 (.9%)	12 (5.2%)	14 (6.1%)	42 (18.3%)	103 (44.8%)	57 (24.8%)
Parents support educational opportunities for their child(ren) outside of the school day.	9 (3.9%)	33 (14.3%)	62 (27.0%)	93 (40.4%)	29 (12.6%)	4 (1.7%)
Test scores are accurate measures of student achievement.	45 (19.6%)	60 (26.1%)	57 (24.8%)	61 (26.5%)	7 (3.0%)	0 (0%)

When compared to the whole sample (Table 37), the ≥ 50% free/reduced lunch respondents ($M = 4.43$, $SD = .65$) were more tightly grouped around the mean for Parent Communication than those for the whole group ($M = 4.56$, $SD = .63$). The standard deviation also indicated there was little variety in the responses for the whole sample and ≥ 50% free/reduced lunch in the area of Parent Communication. There were 230 teachers who worked

in schools with ≥ 50% free/reduced lunch who responded to the Parent Communication questions.

Table 37

Means for ≥ 50% Free/Reduced Lunch – Parent Communication

Item	*N*	*M* Whole Sample	*SD* Whole Sample	*N*	*M* Parent Communication	*SD* Parent Communication
≥50% Free/ Reduced Lunch	451	4.56	.63	230	4.43	.65

Table 38 contains the frequency data for those respondents with < 35% free/reduced Lunch with items that addressed Teacher Communication. The top response by frequency was somewhat agreed for, "Feedback on a student's work is more helpful to students than a letter/ number grade" (*N* = 48, 52.7%). "Letter grades offer the incentive for students to learn" (*N* = 42, 46.2%) was the second strongest as measured by frequency for respondents with < 35% free/reduced lunch that addressed items of Teacher Communication. When looking at the entirety of agreement (somewhat agree, agree, and strongly agree were combined) the strongest response (*N* = 88, 96.7%) was to "Feedback on a student's work is more helpful to students than a letter/number grade."

Table 38

< 35% Free/Reduced Lunch – Teacher Communication

Statement	Strongly Disagree *N* (%)	Disagree *N* (%)	Somewhat Disagree *N* (%)	Somewhat Agree *N* (%)	Agree *N* (%)	Strongly Agree *N* (%)
Feedback on a student's work is more helpful to students than a letter/ number grade.	0 (0%)	0 (0%)	3 (3.3%)	15 (16.5%)	48 (52.7%)	25 (27.5%)
Report card grades reflect academic achievement, effort, behavior, and motivation.	3 (3.3%)	8 (8.8%)	15 (16.5%)	32 (35.2%)	24 (26.4%)	9 (9.9%)
Letter grades offer the incentive for students to learn.	0 (0%)	13 (14.3%)	17 (18.7%)	42 (46.2%)	15 (16.5%)	4 (4.4%)
Grades allow parents to clearly understand and support the learning process.	2 (2.2%)	15 (16.5%)	20 (22.0%)	29 (31.9%)	21 (23.1%)	4 (4.4%)

When compared to respondents < 35% free/reduced lunch ($M = 3.90$, $SD = .49$), the whole sample responses ($M = 3.85$, $SD = .55$) were more tightly clustered around the mean for Teacher Communication (Table 39). The standard deviation also indicated there was more variety in the responses for the whole sample than for those with < 35% free/reduced lunch in the

area of Teacher Communication. There were 91 teachers who worked in schools with < 35% free/reduced lunch who responded to the teacher communication questions.

Table 39

Means for < 35% Free/Reduced Lunch – Teacher Communication

Item	*N*	*M* Whole Sample	*SD* Whole Sample	*N*	*M* Teacher Communication	*SD* Teacher Communication
<35%	451	3.85	.55	91	3.90	.49

Table 40 contains the frequency data for those respondents with ≥ 50% free/reduced lunch for items that addressed Teacher Communication. The top response by frequency agreed with "Letter grades offer the incentive for students to learn" (*N* = 111, 48.3%). "Feedback on a student's work is more helpful to students than a letter/number grade" (*N* = 209, 90.9%) was a statement with strong frequency when somewhat agree (*N* = 53, 22.7%), agree (*N* = 92, 39.5%) and strongly agree (*N* = 69, 29.6%) scores were combined.

Table 40

Frequency Data for ≥ 50% Free/Reduced Lunch – Teacher Communication

Statement	Strongly Disagree *N* (%)	Disagree *N* (%)	Somewhat Disagree *N* (%)	Somewhat Agree *N* (%)	Agree *N* (%)	Strongly Agree *N* (%)
Feedback on a student's work is more helpful to students than a letter/ number grade.	4 (1.7%)	5 (2.2%)	12 (5.2%)	64 (27.8%)	83 (36.1%)	62 (27.0%)
Report card grades reflect academic achievement, effort, behavior, and motivation.	10 (4.3%)	20 (8.7%)	38 (16.5%)	80 (34.8%)	65 (28.3%)	17 (7.4%)
Letter grades offer the incentive for students to learn.	9 (3.9%)	21 (9.1%)	40 (17.4%)	111 (48.3%)	42 (18.3%)	7 (3.0%)
Grades allow parents to clearly understand and support the learning process.	15 (6.5%)	36 (15.7%)	44 (19.1%)	85 (37.0%)	45 (19.6%)	5 (2.2%)

When compared to the whole sample (Table 41), the whole group respondents (M = 3.85, SD = .55) were similar to the mean for Teacher Communication for those with ≥ 50% Free/Reduced Lunch (M = 3.85, SD = .56). The standard deviation also indicated there was little variety in the responses for the whole sample and ≥ 50% free/reduced lunch in the area of

Teacher Communication. There were 230 teachers who worked in schools with ≥ 50% free/reduced lunch and responded to the Teacher Communication questions.

Table 41

Means for ≥ 50% Free/ Reduced Lunch – Teacher Communication

Item	*N*	*M* Whole Sample	*SD* Whole Sample	*N*	*M* Teacher Communication	*SD* Teacher Communication
≥50% Free/ Reduced Lunch	451	3.85	.55	230	3.85	.56

Table 42 contains the frequency data for those respondents in schools with < 35% free/reduced lunch that addressed items of student mindset. The top responses by frequency were in strong agreement (*N* = 57, 62.6%) with "The expectations of the teacher influence the achievement of his/her students." "Students are motivated when they see themselves as learners" had the next highest response with respondents (*N* = 46, 40.5%) who agreed. When looking at the entirety of agreement (somewhat agree, agree, and strongly agree were combined), "The expectations of the teacher influence the achievement of his/her students" produced the most frequency of responses (*N* = 90, 98.9%). There were two responses with strong responses also, "It is important for students to help create learning goals" and "Students are motivated when they see themselves as learners;" both showed the same frequencies of responses (*N* = 86, 94.5%).

Table 42

Frequency Data for < 35% Free/Reduced Lunch – Mindset

Statement	Strongly Disagree *N* (%)	Disagree *N* (%)	Somewhat Disagree *N* (%)	Somewhat Agree *N* (%)	Agree *N* (%)	Strongly Agree *N* (%)
The process of learning is more fascinating than the content of learning.	0 (0%)	5 (5.5%)	9 (9.9%)	32 (35.2%)	37 (40.7%)	8 (8.8%)
The expectations of the teacher influence the achievement of his/her students.	0 (0%)	0 (0%)	1 (1.1%)	7 (7.7%)	26 (28.6%)	57 (62.6%)
Looking 'smart' to peers is important to student learning.	3 (3.3%)	13 (14.3%)	9 (9.9%)	39 (42.9%)	22 (24.2%)	5 (5.5%)
Students are motivated when they see themselves as learners.	0 (0%)	0 (0%)	5 (5.5%)	8 (8.8%)	46 (40.5%)	32 (35.2%)
It is important for students to help create learning goals.	1 (1.1%)	1 (1.1%)	3 (3.3%)	22 (24.2%)	41 (45.1%)	23 (25.3%)
Incentives produce learning just as engagement produces learning.	1 (1.1%)	11 (12.1%)	12 (13.2%)	34 (37.4%)	26 (28.6%)	7 (7.7%)

When compared to the respondents with < 35% free/reduced lunch (M = 4.46, SD = .42), the whole sample (M = 4.43, SD = .47) was somewhat more tightly clustered around the mean for student mindset (Table 43). The standard deviation also indicated there was more variety in the responses for the whole sample than for those with < 35% free/reduced lunch in the area of student mindset. There were 91 teachers who worked in schools with < 35% free/reduced lunch who responded to the mindset questions.

Table 43

Means for < 35% Free/Reduced Lunch – Mindset

Item	*N*	*M* Whole Sample	*SD* Whole Sample	*N*	*M* Mindset	*SD* Mindset
<35% Free/ Reduced Lunch	451	4.43	.47	91	4.46	.42

Table 44 contains the frequency data for those respondents in schools with ≥ 50% free/ reduced lunch with items that addressed Student Mindset. The top responses by frequency were in somewhat agreement with, "Looking 'smart' to peers is important to student learning" (N = 114, 49.6%). The second highest responses by frequency were agree (N = 116, 49.8%) for "It is important for students to help create learning goals" (N = 98, 42.6%) and "Students are motivated when they see themselves as learners" (N = 97, 42.2%). Three statements demonstrated strong frequency when somewhat agree, agree, and strongly agree were combined: (a) "expectations of the teacher influence achievement of students" (N = 222, 96.5%), (b) "students are motivated when they see themselves as learners" (N = 219, 95.2%), and (c) "it is important for students to help create learning goals" (N = 211, 91.7%).

Table 44

Frequency Data for ≥ 50% Free/Reduced Lunch – Mindset

Statement	Strongly Disagree *N* (%)	Disagree *N* (%)	Somewhat Disagree *N* (%)	Somewhat Agree *N* (%)	Agree *N* (%)	Strongly Agree *N* (%)
The process of learning is more fascinating than the content of learning.	1 (.4%)	9 (3.9%)	33 (14.3%)	65 (28.3%)	90 (39.1%)	32 (13.9%)
The expectations of the teacher influence the achievement of his/her students.	3 (1.3%)	1 (.4%)	4 (1.7%)	13 (5.7%)	69 (30.0%)	140 (60.9%)
Looking 'smart' to peers is important to student learning.	2 (.9%)	30 (13.0%)	32 (13.9%)	114 (49.6%)	45 (19.6%)	7 (3.0%)
Students are motivated when they see themselves as learners.	1 (.4%)	6 (2.6%)	4 (1.7%)	48 (20.9%)	97 (42.2%)	74 (32.2%)
It is important for students to help create learning goals.	3 (1.3%)	2 (.9%)	14 (6.1%)	54 (23.5%)	98 (42.6%)	59 (25.7%)
Incentives produce learning just as engagement produces learning.	4 (1.7%)	20 (8.7%)	25 (10.9%)	94 (40.9%)	66 (28.7%)	21 (9.1%)

When compared to the respondents with ≥ 50% free/reduced lunch (*M* = 4.39, *SD* = .48), the whole sample (*M* = 4.43, *SD* = .47) was somewhat more tightly clustered around the mean for Student Mindset (Table 45). The standard deviation indicated there was little variety in the responses for the whole sample than for those with ≥ 50% free/reduced lunch in the area of Student Mindset. There were 230 teachers who worked in schools with ≥ 50% free/reduced lunch who responded to the mindset questions.

Table 45

Means for ≥ 50% Free/Reduced Lunch – Mindset

Item	*N*	*M* Whole Sample	*SD* Whole Sample	*N*	*M* Mindset	*SD* Mindset
≥ 50% Free/ Reduced Lunch	451	4.43	.47	230	4.39	.48

Table 46 contains the frequency data for those respondents in schools with < 35% free/reduced lunch with items that addressed student assessment. The top responses by frequency agreed with the statement, "Students in my classroom know their learning targets" (learning goals) (*N* = 43, 47.3%). "Students in my classroom know their learning targets" (learning goals) (*N* = 35, 38.5%) was the same statement and had the second highest frequency, but was scored as somewhat agree. When looking at the entirety of agreement (somewhat agree, agree, and strongly agree were combined), the responses for "Students in my classroom know their learning targets" (learning goals) (*N* = 88, 96.7%) had the highest frequency.

Table 46

Frequency Data for < 35% Free/Reduced Lunch – Assessment

Statement	Strongly Disagree *N* (%)	Disagree *N* (%)	Somewhat Disagree *N* (%)	Somewhat Agree *N* (%)	Agree *N* (%)	Strongly Agree *N* (%)
Students in my classroom know their learning targets (learning goals).	0 (0%)	0 (0%)	2 (2.2%)	35 (38.5%)	43 (47.3%)	11 (12.1%)
Parents in my class know the learning goals of their child.	1 (1.1%)	7 (7.7%)	11 (12.1%)	28 (30.8%)	33 (36.3%)	11 (12.1%)
Students are allowed to redo assignments/ assessments without penalty.	3 (3.3%)	10 (11.0%)	11 (12.1%)	30 (33.0%)	32 (35.2%)	5 (5.5%)

When compared to the whole sample (Table 47), the respondents from schools with < 35% free/reduced lunch ($M = 4.34$, $SD = .77$) were more tightly grouped around the mean for Assessment than the whole group ($M = 4.42$, $SD = .70$). The standard deviation also indicated there was the more variety in the responses for < 35% free/reduced lunch ($M = 4.34$, $SD = .77$) than for the whole sample ($M = 4.42$, $SD = .70$) in Student Mindset. There were 91 teachers who worked in schools with < 35% free/reduced lunch who responded to the assessment questions.

Table 47

Means for <35% Free/Reduced Lunch – Assessment

Item	*N*	*M* Whole Sample	*SD* Whole Sample	*N*	*M* Assessment	*SD* Assessment
<35% Free/ Reduced Lunch	451	4.42	.70	91	4.34	.77

Table 48 contains the frequency data for those respondents in schools with ≥ 50% free/reduced lunch with items addressing Assessment. The top responses by frequency were in agreement with, "Students in my classroom know their learning targets (learning goals)" (*N* = 128, 55.7%). The second highest set of responses by frequency was agree (*N* = 90, 39.1%) to "Parents in my class know the learning goals of their child." The statement about students in the classroom knowing learning targets (learning goals) was a statement with strong frequency when combining somewhat agree (*N* = 56, 24.3%), agree (*N* = 128, 55.7%) and strongly agree (*N* = 40, 17.4%) columns in an overall response (*N* = 224, 97.4%).

Table 48

Frequency Data for ≥ 50% Free/Reduced Lunch – Mindset

Statement	Strongly Disagree *N* (%)	Disagree *N* (%)	Somewhat Disagree *N* (%)	Somewhat Agree *N* (%)	Agree *N* (%)	Strongly Agree *N* (%)
Students in my classroom know their learning targets (learning goals).	1 (.4%)	2 (.9%)	3 (1.3%)	56 (24.3%)	128 55.7%)	40 (17.4%)
Parents in my class know the learning goals of their child.	2 (.9%)	11 (4.8%)	27 (11.7%)	84 (36.5%)	90 (39.1%)	16 (7.0%)
Students are allowed to redo assignments/ assessments without penalty.	3 (1.3%)	19 (8.3%)	38 (16.5%)	78 (33.9%)	78 (33.9%)	14 (6.1%)

When compared to the whole sample (Table 49), the whole group respondents were almost evenly grouped around the mean for Student Mindset ($M = 4.42$, $SD = .70$) than those who were in schools with ≥ 50% free/reduced lunch ($M = 4.41$, $SD = .65$). The standard deviation also indicated there was more variety in the responses for the whole sample than for those respondents in schools with ≥ 50% free/reduced lunch for student mindset. There were 230 respondents to the survey with ≥ 50% free/reduced lunch who responded to the questions on student mindset.

Table 49

Means for ≥ 50% Free/Reduced Lunch – Mindset

Item	*N*	*M* Whole Sample	*SD* Whole Sample	*N*	*M* Assessment	*SD* Assessment
≥ 50% Free/ Reduced Lunch	451	4.42	.70	230	4.41	.65

Inferential Data

The null hypotheses were developed and tested for each area signified by the research questions. The following represent the null hypotheses:

$H_0$1. There is no significant difference on assessment composite scores based on reporting systems within schools.

$H_0$2. There is no significant difference on communication composite scores based on reporting systems within schools.

$H_0$3. There is no significant difference on mindset composite scores based on reporting systems within schools.

The first hypothesis was "Is there a significant difference on assessment composite scores based on reporting systems within schools?" This was initially addressed by seven research questions within the survey. After factor analysis, the pattern matrix validated three questions within the assessment grouping. They were (a) Students in my classroom know their learning targets (learning goals), (b) Parents in my class know the learning goals of their child(ren), and, (c) Students are allowed to redo assignments/assessments without penalty. Also, data collected allowed *t* test information to be compiled for both respondents with ≥ 50% free/reduced population and *t* test information for respondents with < 35% free/reduced population.

Assessment and ≥ 50% Free/Reduced Population

The assumptions of independent samples *t* test were examined to assure the assumptions were met. First, the examination of the box plot revealed there were no outliers since no data point was more than 1.5 standard deviations away from the edge of the box within the box plots. Therefore, there were no outliers within the dependent variables, and the assumption was met. Next the assumption of normality was inspected using the Shapiro-Wilk test. Since the *p* value was > .05, there was no violation of assumption of normality. The Levine's test for equality of variances, or homogeneity of variance, was also observed and reported, $F = 2.024$, $p = .156$. Consequently, Levine's test was not significant, the assumption of homogeneity was not violated meaning the variance between on assessment composite scores for respondents who reported ≥ 50% free/reduced lunch and used either traditional or standards-based reporting systems (cards) within schools were equal to each other.

The independent samples *t* test included 121 teachers who used traditional reporting cards ($M = 4.23$, $SD = .67$) and 109 teachers who used standards-based reporting systems ($M = 4.67$, $SD = .58$). There was a significant difference found between respondents who used traditional report cards and those who used standards-based report cards, $t(228) = 4.75$, $p < .001$, two-tailed. Therefore, the null was rejected. On average, in schools with ≥ 50% free/reduced lunch populations, teachers who used standards-based report cards reported higher scores on assessment statements ($M = 4.62$, $SD = .58$) than those teacher who used traditional report cards ($M = 4.23$, $SD = .67$).

Assessment and < 35%% Free/Reduced Lunch Population

The assumptions of independent samples *t* test were studied to assure the assumptions were met. First, the examination of the box plot revealed there were no outliers since no data

point was more than 1.5 standard deviations away from the edge of the box within the box plots. Therefore, there were no outliers within the dependent variables, and the assumption was met. Next, the assumption of normality was inspected using the Shapiro-Wilk test. Since the *p* value was > .05, there was no violation of assumption of normality. The Levine's test for homogeneity of variance was also observed and reported, $F = 0.022$, $p = .881$. Consequently, the assumption of homogeneity was not violated, meaning the variance between on assessment composite scores for respondents who reported ≥ 50% free/reduced lunch used either traditional or standards-based reporting systems (cards) within schools were equal to each other.

The independent samples *t* test included 40 teachers using traditional reporting cards ($M = 4.08$, $SD = .75$), and 51 teachers used standards-based reporting systems ($M = 4.54$, $SD = .72$). There was a significant difference found between respondents who used traditional report cards and those who used standards-based report cards, $t(89) = 3.00$, $p = .003$, two-tailed. Therefore, the null was rejected. On average, in schools with < 35% free/reduced lunch populations, teachers who used standards-based report cards reported higher scores on assessment statements ($M = 4.54$, $SD = .72$) than those who used traditional report cards ($M = 4.08$, $SD = .75$).

The second null hypothesis was "Is there a significant difference on communication composite scores based on reporting systems within schools?" Communication was initially addressed by seven research questions within the survey. After factor analysis, the pattern matrix validated four questions within the Communication from the Parent viewpoint. They were; (a) Parents care about the education of their child(ren), (b) Formative, ongoing assessments are key elements of instruction, (c) Parents support educational opportunities for their child(ren) outside of the school day, and (5) Test scores are accurate measures of student achievement. After factor analysis, the pattern matrix also validated four questions within the

Communication from teacher viewpoint. They were: (a) Feedback on a student's work is more helpful to students than a letter/number grade; (b) Report card grades reflect academic achievement, behavior, and motivation; (c) Letter grades offer the incentive for students to learn; and (d) Grades allow parents to clearly understand and support the learning process. Also, data collected allowed for compilation of *t* test information for both respondents with ≥ 50% free/reduced lunch population and for respondents with < 35% free/reduced lunch population.

Parent Communication and ≥ 50% Free/Reduced Lunch Population

The assumptions of independent samples *t* test were studied to assure the assumptions were met. First, the examination of the box plot revealed there were no outliers since no data point was more than 1.5 standard deviations away from the edge of the box within the box plots. Therefore, there were no outliers within the dependent variables, and the assumption was met. Next, the assumption of normality was inspected using the Shapiro-Wilk test. Since the *p* value was > .05, there was no violation of assumption of normality. The Levine's test for equality of variances, or homogeneity of variance, was also observed and reported, $F = 2.668$, $p = .104$. Consequently, Levine's test was not significant, the assumption of homogeneity was not violated, meaning the variance between on assessment composite scores for respondents who reported ≥ 50% free/reduced lunch using either traditional or standards-based reporting systems (cards) within schools were equal to each other.

The independent samples *t* test included 121 teachers who used traditional reporting cards ($M = 4.34$, $SD = .68$), and 109 teachers who used standards-based reporting systems ($M = 4.53$, $SD = .60$). There was a significant difference found between respondents who used traditional report cards and those who used standards-based report cards, $t(228) = 2.23$, $p = .027$, two-tailed. Therefore, the null was rejected. On average, in schools with ≥ 50% free/reduced lunch

populations, teachers who used standards-based report cards reported higher scores on parent communication statements ($M = 4.53$, $SD = .60$) than those who used traditional report cards ($M = 4.34$, $SD = .68$).

Parent Communication and < 35% Free/Reduced Lunch Population

The assumptions of independent samples *t* test were studied to assure the assumptions were met. First, the examination of the box plot revealed there were no outliers since no data point was more than 1.5 standard deviations away from the edge of the box within the box plots. Therefore, there were no outliers within the dependent variables, and the assumption was met. Next, the assumption of normality was inspected using the Shapiro-Wilk test. Since the *p* value was > .05, there was no violation of assumption of normality. The Levine's test for equality of variances, or homogeneity of variance, was also observed and reported, $F = 1.188$, $p = .279$. Consequently, Levine's test was not significant, the assumption of homogeneity was not violated, meaning the variance between on assessment composite scores for respondents who reported ≥ 50% free/reduced lunch used either traditional or standards-based reporting systems (cards) within schools were equal to each other.

The independent samples *t* test included 40 teachers who used traditional reporting cards ($M = 4.88$, $SD = .54$), and 51 teachers who used standards-based reporting systems ($M = 4.72$, $SD = .62$). There was not a significant difference found between respondents who used traditional report cards and those who used standards-based report cards, $t(89) = 1.29$, $p = .202$, two-tailed. Since the *p* value was > .05, the difference could be due to chance. Therefore, the null was not rejected. On average, in schools with ≥ 50% free/reduced lunch populations, teachers who used traditional report cards reported slightly higher scores on assessment

statements ($M = 4.88$, $SD = .54$) than those who used standards-based report cards ($M = 4.72$, $SD = .62$).

Teacher Communication and ≥ 50% Free/Reduced Lunch Population

The assumptions of independent samples *t* test were studied to assure the assumptions were met. First, the examination of the box plot revealed there were no outliers since no data point was more than 1.5 standard deviations away from the edge of the box within the box plots. Therefore, there were no outliers within the dependent variables and the assumption was met. Next, the assumption of normality was inspected using the Shapiro-Wilk test. Since the *p* value was > .05, there was no violation of assumption of normality. The Levine's test for equality of variances, or homogeneity of variance, was also observed and reported, $F = 1.990$, $p = .160$. Consequently, Levine's test was not significant, the assumption of homogeneity was not violated, meaning the variance between assessment composite scores for respondents who reported ≥ 50% free/reduced lunch used either traditional or standards-based reporting systems (cards) within schools were equal to each other.

The independent samples *t* test included 121 teachers who used traditional reporting cards ($M = 3.76$, $SD = .59$), and 109 teachers who used standards-based reporting systems ($M = 3.95$, $SD = .51$). There was a significant difference found between respondents who used traditional report cards and those who used standards-based report cards, $t(228) = 2.67$, $p = .008$, two-tailed. Therefore, the null was rejected. On average, in schools with ≥ 50% free/reduced lunch populations, teachers who used standards-based report cards reported higher scores on teacher communication statements ($M = 3.95$, $SD = .51$) than those who used traditional report cards ($M = 3.76$, $SD = .59$).

Teacher Communication and < 35% Free/Reduced Lunch Population

The assumptions of independent samples *t* test were studied to assure the assumptions were met. First, the examination of the box plot revealed there were no outliers since no data point was more than 1.5 standard deviations away from the edge of the box within the box plots. Therefore, there were no outliers within the dependent variables, and the assumption was met. Next, the assumption of normality was inspected using the Shapiro-Wilk test. Since the *p* value was > .05, there was no violation of assumption of normality. The Levine's test for equality of variances, or homogeneity of variance, was also observed and reported, $F = .77$, $p = .394$. Consequently, Levine's test was not significant, the assumption of homogeneity was not violated, meaning the variance between on assessment composite scores for respondents who reported < 35% free/reduced lunch used either traditional or standards-based reporting systems (cards) within schools were equal to each other.

The independent samples *t* test included 40 teachers who used traditional reporting cards ($M = 4.03$, $SD = .44$), and 51 teachers who used standards-based reporting systems ($M = 3.79$, $SD = .51$). There was a significant difference found between respondents who used traditional report cards and those who used standards-based report cards, $t(89) = 2.39$, $p = .019$, two-tailed. Therefore, the null was rejected. On average, in schools with < 35% free/reduced lunch populations, teachers who used standards-based report cards reported lower scores on teacher communication statements ($M = 3.79$, $SD = .51$) than those who used traditional report cards ($M = 4.03$, $SD = .44$).

The third null hypothesis was "Is there a significant difference on mindset composite scores based on reporting systems within schools?" This was initially addressed by seven research questions within the survey. After factor analysis, the pattern matrix validated six

questions within the mindset grouping. They were; (a) The process of learning is more fascinating than the content of learning, (b) The expectations of the teacher influence the achievement of his/her students, (c) Looking "smart" to peers is important to student learning, (d) Students are motivated when they see themselves as learners, (e) It is important for students to help create learning goals, and (f) Incentives produce learning just as engagement produces learning. Also, data collected allowed for compiling *t* test information for both respondents with ≥ 50% free/reduced lunch population and *t* test information for respondents with < 35% free/reduced lunch population.

Mindset and ≥ 50% Free/Reduced Lunch Population

The assumptions of independent samples tests were studied to assure the assumptions were met. First, the examination of the box plot revealed there were no outliers since no data point was more than 1.5 standard deviations away from the edge of the box within the box plots. Therefore, there were no outliers within the dependent variables, and the assumption was met. Next, the assumption of normality was inspected using the Shapiro-Wilk test. Since the *p* value was > .05, there was no violation of assumption of normality. The Levine's test for equality of variances, or homogeneity of variance, was also observed and reported, $F = .081$, $p = .776$. Consequently, Levine's test was not significant, the assumption of homogeneity was not violated, meaning the variance between on assessment composite scores for respondents who reported ≥ 50% free/reduced lunch used either traditional or standards-based reporting systems (cards) within schools were equal to each other.

The independent samples *t* test included 121 teachers who used traditional reporting cards ($M = 4.32$, $SD = .46$), and 109 teachers who used standards-based reporting systems ($M = 4.48$, $SD = .50$). There was a significant difference found between respondents who used traditional

report cards and those who used standards-based report cards, $t(228) = 2.61$, $p = .010$, two-tailed. Therefore, the null was rejected. On average, in schools with ≥ 50% free/reduced lunch populations, teachers who used standards-based report cards reported higher scores on mindset statements ($M = 4.48$, $SD = .50$) than those who used traditional report cards ($M = 4.32$, $SD = .46$).

Mindset and <35% Free/Reduced Lunch Population

The assumptions of independent samples *t* test were studied to assure the assumptions were met. First, the examination of the box plot revealed there were no outliers since no data point was more than 1.5 standard deviations away from the edge of the box within the box plots. Therefore, there were no outliers within the dependent variables, and the assumption was met. Next, the assumption of normality was inspected using the Shapiro-Wilk test. Since the *p* value was > .05, there was no violation of assumption of normality. The Levine's test for equality of variances, or homogeneity of variance, was also observed and reported, $F = .017$, $p = .896$. Consequently, Levine's test was not significant, the assumption of homogeneity was not violated, meaning the variance between on assessment composite scores for respondents who reported < 35% free/reduced lunch used either traditional or standards-based reporting systems (cards) within schools were equal to each other.

The independent samples *t* test included 40 teachers who used traditional reporting cards ($M = 4.50$, $SD = .43$), and 51 teachers who used standards-based reporting systems ($M = 4.43$, $SD = .41$). There was a significant difference found between respondents who used traditional report cards and those who used standards-based report cards, $t(89) = 3.00$, $p < .003$, two-tailed. Therefore, the null was rejected. On average, in schools with < 35% free/reduced lunch populations, teachers who used standards-based report cards reported lower scores on mindset

statements ($M = 4.43$, $SD = .41$) than those who used traditional report cards ($M = 4.50$, $SD = .43$).

Summary of Findings

In April 2015, elementary teachers who currently held positions within Indiana were surveyed. Responding to the survey were 451 current elementary teachers, 217 (48.1%) who used traditional reporting cards and 233 (51.8%) who used standards-based report cards. Data for one respondent was missing. Descriptive statistics were then analyzed to determine the relationship between the type of report cards used and teacher views of assessment, parent viewpoint of communication, teacher viewpoint of communication, and student mindset.

Teachers who used standards-based report cards reported higher scores on assessment statements than those who used traditional report cards in both schools of poverty and schools of affluence. Overall, there was a significant difference found between teachers who used traditional report cards and those who used standards-based report cards in the area of assessment, regardless of poverty level.

Communication from the viewpoint of the parent also yielded higher mean scores by teachers who used traditional report cards than those who used standards-based report cards in schools of poverty, but in schools of affluence the standards-based reporting system had a higher mean. Regarding communication from a parent's point of view, there was a significant difference between teachers who used traditional report cards and standards-based report cards with a $\geq 50\%$ free/reduced lunch status. There was no significant difference between teachers who used traditional or standards-based report cards with $< 35\%$ free/reduced lunch.

Communication from the viewpoint of the teacher also yielded higher scores by teachers who used traditional report cards than those who used standards-based report cards and $< 35\%$

free/reduced lunch. The viewpoint of teachers regarding communication from a parental point of view was higher for those teachers who used standards-based report cards and had ≥ 50% free/reduced lunch. Looking at communication from a parent's point of view, there was a significant difference between teachers who used traditional report cards and standards-based report cards whether in schools of poverty or schools of affluence.

The teacher responses to mindset showed those who used standards-based report cards with ≥ 50% free/reduced lunch had a higher score than those who used traditional report cards, and those who used standards-based with < 35% free/reduced lunch had lower scores than those who used traditional report cards. Regarding student mindset, there was a significant difference between teachers who used traditional report cards and standards-based report cards with a ≥ 50% free/reduced lunch status, but no significant difference between teachers who used traditional or standards-based report cards with < 35% free/reduced lunch.

Chapter 5 offers a summary of the findings expressed in the study. Implications of the findings and recommendations based on the findings are also discussed. Limitations of the study are addressed and recommendations for future research are offered. A summary of the main points of this research completes Chapter 5.

CHAPTER 5

SUMMARY OF FINDINGS, IMPLICATIONS, AND RECOMMENDATIONS FOR FUTURE RESEARCH

This study was conducted to determine whether or not there is a significant difference between the perceptions of teachers who use traditional report cards and those who use standards-based report cards in the areas of assessment, communication, and mindset of students. Chapter 5 is divided into three major sections. The first section offers a summary of the findings in the study. The second section presents implications and recommendations based on those findings. The final section offers recommendations for future research. The three sections are then followed by a short summary of the study.

Summary of Findings

A survey was sent to 6,843 teachers who held elementary teaching licenses. Responding were 451 teachers, 217 (48.1%) who reported they used traditional reporting cards, and 233 (51.8%) who reported they used standards-based report cards. Descriptive statistics were analyzed to determine the relationship between the type of report cards used and areas of assessment, parent viewpoint of communication, teacher viewpoint of communication, and student mindset. Initially, there were only three areas of hypotheses—assessment, communication, and student mindset. However, a Cronbach's alpha test revealed a lack of internal consistency so a factor analysis was completed. The factor analysis yielded four areas in

the pattern matrix that then supported the areas of assessment and student mindset and divided communication into two viewpoints—that of the teacher and that of the parent. At that point, a *t* test was completed to determine whether there were significant differences between the two different reporting types on any of the four factors within both types of schools.

Communication from the viewpoint of the teacher was significant for both students in schools of affluence and students in schools of poverty. In the area of communication from the viewpoint of teachers, the mean for standards-based respondents ($M = 3.95$, $SD = .51$) for schools of poverty was significantly higher than the mean for traditional respondents ($M = 3.76$, $SD = .59$). Teachers of students in schools of poverty responded that standards-based grading provided better communication for the teacher than a traditional report card. When teachers worked with students in schools of poverty, those who used standards-based report cards were significantly stronger, $t(228) = 2.67$, $p = .008$) in the area of communication from a teacher viewpoint. The mean in the area of communication for schools of affluence, from the viewpoint of teachers, was higher for traditional respondents ($M = 4.03$, $SD = .44$) than for standards-based respondents ($M = 3.79$, $SD = .51$). For schools of affluence, teachers responded that traditional report cards offered better communication. When teachers worked in schools of affluence, those who used traditional report cards were significantly stronger, $t(89) = 2.39$, $p = .019$), in the area of communication from teachers viewpoints.

The findings on communication from the viewpoint of the teacher were based on replies to four statements: (a) Feedback on a student's work is more helpful to students than a letter/number grade (Tomlinson, 2011); (b) Report cards reflect academic achievement, effort, behavior and motivation (Guskey & Jung, 2013; Marzano & Heflebower, 2011); (c) Letter grades offer the incentive for students to learn (Stiggins, 2007b; Willingham, 2002); and (d)

Grades allow parents to clearly understand and support the learning process (Guskey & Jung, 2013; Kohn, 2011; Tomlinson, 2005). The respondents agreed with the statements and their responses yielded significant findings for both schools of affluence and schools of poverty. Specifically, although Stiggins (2004) and Willingham (2002) agreed that letter grades offered the incentive for students to learn, this study revealed 69% of responding teachers agreed with the statement. Tomlinson (2005) found that feedback on the letter grade helps students more than letter grades, and 91% of teacher respondents agreed. Although 58% of teachers who responded agreed letter grades allow parents to understand and support the learning process, according to research by Guskey and Jung (2012), Kohn (2011), and Tomlinson (2005), this is due to more familiarity with letter grades than actual understanding of achievement. The research suggested letter grades are a common form of communicating student achievement, because both teachers and parents are familiar with letter grades, due to their personal experiences. However, research suggested letter grades have long been used as a form of communication, although they often are meaningless insofar as communicating student achievement (Finkelstein, 1913).

For this study, the area of teacher communication had the unique distinction of having highly significant findings for traditional report cards and highly significant findings for standards-based report cards. Teachers in schools of poverty reported standards-based report cards were more effective for their students. This could be because students in schools of poverty benefit more from the breaking down of standards, both within the classroom and on a report card. Students in schools of poverty often start academically behind students in schools of affluence. Standards-based report cards identify specific learning skills students need to learn, and communicate student deficiencies with greater detail. Teachers in schools of affluence

responded that traditional report cards were more effective for their students in regards to teacher communication of student achievement. One reason for this may be that affluent students typically enter school with higher skills and excel faster than students in schools of poverty, and teachers do not see a need for the breakdown of overall letter grades into skill areas.

Communication from the viewpoint of the parent was significant, $t(228) = 2.23$, $p = .027$, for schools of poverty. In the area of communication from the viewpoint of parents, the mean for standards-based respondents ($M = 4.53$, $SD = .60$) for schools of poverty was significantly higher than the mean for traditional respondents ($M = 4.34$, $SD = .68$). Teachers of students from poverty responded that standards-based report cards offered better communication, $t(228) = 2.23$, $p = .027$, from the viewpoint of parents than a traditional report card. Respondents found communication from the viewpoint of parents as not significant, $t(89) = 1.29$, $p = .202$, for schools of affluence. The mean in the area of communication for schools of affluence from the viewpoint of parents was higher for traditional respondents ($M = 4.88$, $SD = .54$) than for standards-based respondents ($M = 4.72$, $SD = .62$), but this could be contributed to chance as the difference was not significant. Teachers in schools of affluence responded that there was not a significant difference between traditional report cards and standards-based report cards, $t(89) = 1.29$, $p = .202$, regarding communication from the viewpoint of parents.

The findings on communication from the parent viewpoint were based on replies by teachers to four statements: (a) Parents care about the education of their child(ren) (Thompson, 2007); (b) Formative, ongoing assessments are key elements of instruction (Black & Wiliam, 1998; Erickson, 2011; Guskey & Jung, 2012); (c) Parents support educational opportunities for their child(ren) outside the school day (Duncan & Murane, 2014; Dweck, 2006). The fourth statement was that test scores are accurate measures of student achievement (Kohn, 2011;

O'Connor & Wormelli, 2011). This was actually a statement that was reverse-coded, and 67% of respondents disagreed with the statement, giving support to research.

Parent communication, for this study, had highly significant findings for standards-based report cards, yet no significance for traditional report cards. This may be because parents in schools of poverty benefit more from ongoing communication regarding formative growth within the classroom. They also benefit from a breakdown on the report card of specifically what skills their child(ren) are lacking in. Parents in schools of poverty want their child(ren) to succeed in school, and this breakdown offers parents the next steps to help their child(ren) succeed. Students in schools of poverty often start school academically behind students in schools of affluence due to a lack of parents knowing how to build academic success at early ages. Another reason students in schools of poverty start behind is that parents (often single parents) need to often work multiple or low paying jobs in order to support their family. Teachers of students in schools of affluence did not find significance with either reporting system. One reason for this may be that parents in schools of affluence typically have more time and resources and are able to provide more academic assistance to or for their child(ren). Resources often are in the form of time or money to provide assistance and support with academic concerns or academic enrichment opportunities that parents in schools of poverty do not have access to (Duncan & Murane, 2014).

Respondents found student mindset was significant, $t(228) = 2.61$, $p = .010$, for schools of poverty. The mean for standards-based respondents ($M = 4.48$, $SD = .50$) for schools of poverty was significantly higher than the mean for traditional respondents ($M = 4.31$, $SD = .46$). Teachers of students from poverty responded that standards-based grading impacted student mindset more than a traditional report card. Respondents did not demonstrate as a significant

difference on student mindset, $t(89) = 0.73$, $p = .467$) for schools of affluence. The mean in the area of student mindset for schools of affluence was higher for traditional respondents ($M = 4.50$, $SD = .43$) than for standards-based respondents ($M = 4.43$, $SD = .41$). For schools of affluence, teachers responded that traditional report cards impacted student mindset more than standards-based report cards, yet the impact was not significant and could be attributed to chance.

The findings on mindset were based on replies to six statements: (a) The process of learning is more fascinating than the content of learning (Dweck, 2006; Pink, 2009); (b) The expectations of the teacher influence the achievement of his/her students (Dweck, 2006; Ricci, 2013; Thompson, 2007); (c) Looking "smart" to peers is important to student learning (Ricci, 2013); (d) Students are motivated when they see themselves as learners (Dweck, 2006; Pink, 2009); (e) It is important for students to help create learning goals (O'Connor, 2009; Stiggins & Chappuis, 2005); (f) Incentives produce learning just as engagement produces learning (O'Connor, 2009; Pink, 2009). The final statement was actually a reverse-coded statement, which means that research does not support the statement that incentives produce learning just as engagement produces learning.

Standards-based teachers responded that mindset was significant in schools of poverty but did not find mindset to be significant in schools of affluence. One reason for this could be that the expectations of the teacher are often higher in schools of affluence than in schools of poverty. Students in schools of poverty often enter with less academic skills, and although teachers have the same standards to address, teachers in schools of poverty have to provide more scaffolding and support to their students. Therefore, their expectations lower so they may see themselves and their students as successful. Their students may well have grown more than the students in schools of affluence but may not yet be academically on par with their peers.

Overall, there was a significant difference found between teachers who used standards-based report cards and those who used traditional report cards in the area of assessment, whether students were in a school of affluence or a school of poverty. In the area of assessment for schools of poverty, the mean for standards-based respondents ($M = 4.62$, $SD = .58$) was significantly higher than the mean for traditional respondents ($M = 4.23$, $SD = .67$). The mean in the area of assessment for schools of affluence was higher for standards-based respondents ($M = 4.54$, $SD = .72$) than for traditional respondents ($M = 4.08$, $SD = .75$). Assessment mean scores offered the most disparity between standards-based and traditional scores than every other set of scores, reflecting the strength of teacher respondent support for standard-based assessments.

The findings on assessment were based on replies to three statements: (a) Students in my classroom know their learning targets/goals (O'Connor, 2009; Stiggins & Chappuis, 2005); (b) Parents in my class know the learning goals of their child (O'Connor, 2009; Oliver, 2011); (c) Students are allowed to redo assignments/assessments without penalty (O'Connor, 2009). Respondents agreed with the statements and their responses yielded significant findings for both schools of affluence and schools of poverty. They also reported higher means for standards-based report cards than for traditional report cards. Whether teachers worked with students in schools of affluence or students in schools of poverty, those using standards-based report cards were significantly stronger in support of the area of assessment that agreed with the research supporting the statements. Specifically, O'Connor (2011) and Stiggins and Chappuis (2005) not only supported students and parents who know learning goals and the ability of students to redo assignments, they also support standards-based reporting as the best method to communicate learning goals and support multiple opportunities for students to demonstrate knowledge of material.

One overall findings of this study was that teachers in schools of poverty found standards-based report cards more effective for their students than traditional report cards. One reason for this could be that students in schools of poverty often struggle more with learning than do students in schools of affluence (Duncan & Murane, 2014). Standards-based reporting breaks learning into specific elements of instruction that are then used as feedback to improve student understanding. Reports to parents are broken down into more specific elements of learning that in turn provide parents with more specific progress of student achievement (O'Connor, 2009; Stiggins, 2006).

Standards-based instruction also allows teachers to more easily differentiate their teaching by breaking down standards and offering students more specific learning targets, or next steps, to improve their learning. Quinn (2012) stated, "Grades tell students how well they did in comparison to each other, but almost nothing of what they need to work on to get better" (p. 57). An important element of successful standards-based reform initiative includes grading and reporting that refers to specific learning criteria (Guskey, 2006). Diamond (2007) found that students in schools of poverty often receive more didactic instruction (lecture, seat work, memorization, recitation) than do students in schools of affluence. He encouraged addressing class achievement gaps by increasing the use of interactive forms of instruction, which is most commonly used with standards-based reforms. This study supports research that teachers of students in schools of poverty may benefit from differentiating the presentation of material. In other words, teaching in an area of poverty takes different strategies than teaching in areas of affluence in order to impact student performance and growth. Standards-based reporting supports this differentiation by reporting on specific skills rather than offering one grade for an overall area of learning.

Furthermore, this study supports research (O'Connor, 2010; Stiggins & Chappuis, 2005) citing the benefit of breaking down the standards into meaningful, specific criteria that are well-defined learning targets known by students and parents. This study suggests that formative, ongoing assessments are key elements of instruction. Parents may see homework assignments or parent teacher conferences as pieces of this formative instruction and rely upon teachers to share this information with them. Perhaps this is the reason that feedback on a student's work is more helpful to the student that the letter or number grade by itself, according to both survey respondents and research (Tomlinson, 2011).

Student engagement in the learning process is of particular importance to students in schools of poverty. This study supports research by Dweck (2006) and Pink (2009) that suggests that incentives for learning are not as important as student engagement. An important piece of this is supported by research into the mindset of students, significantly students in schools of poverty. Teacher expectations influence the achievement of students (Dweck, 2008; Ricci, 2013) and students are motivated when they see themselves as learners. These statements are supported by research and by the respondents in this study.

Another overall finding of this study was that communication for parents and teachers of students in schools of poverty found standards-based report cards more effective than traditional report cards. For teachers of affluent students, traditional report cards were more effective than standards-based report cards. Communication of student feedback is more powerful than socioeconomic status (Reeves, 2011). According to O'Connor (2009), grades need to be based on public learning goals and standards. Standards-based reporting more clearly removes extraneous elements from the grading process than does traditional grading. According to parent viewpoint as reported by teachers, why, then, do parents of affluent students seem to trust

traditional report cards more? It could be that there is more communication taking place in affluent schools than in schools of poverty. When looking at the communication system (O'Connor, 2009), some of the more comprehensive methods of report card conferencing and other communication strategies may be more accessible to parents of affluence than parents of poverty. O'Connor (2009) offered a chart that explained communication with parents, from limited to comprehensive (Figure 2). Such things as phone calls, web pages, portfolios and exhibitions all come with an added cost, which is sometimes prohibitive to parents of students in poverty. "What is provided must not overwhelm parents" (O'Connor, 209, p. 220). Parents of students in affluence are more likely to understand the grade given on a traditional report card, or ask questions in order to understand the grade.

Limited  Comprehensive								
Report Cards Confer-encing	Grades	Brief comments on report cards	Warning or criticism which is informal	Parent/ Teacher conference without student	Expanded format on report cards	Frequent and ongoing communication	Conferencing involving student	Conferencing led by student
Other communication Strate-gies		Assessment reports that are standardized; weekly or monthly progress reports	Phone calls, notes, letters home	School Open Houses	School Web Pages	Calls home, notes, letters, assignments, and homework	Port-folios, Exhibi-tions	Port-folios, Exhibi-tions

Figure 2. Communication Strategies (adapted from O'Connor, 2009, p. 220).

Yet another finding of this study was in the area of assessment. Teachers of students in schools of poverty and schools of affluence viewed assessment with standards-based report cards more effective than with traditional report cards. Standards-based report cards are based on clear

standards (O'Connor, 2009; Stiggins, 2007a). These standards are spelled out in the report card itself and break down different areas of assessment. They often also offer all stakeholders more direct means of achievement than an overall letter grade. "Students, parents, and teachers must understand not only what the grade is, they must also have sufficiently specific information that they can collaborate to use the teacher's feedback to improve student performance" (Reeves, 2011, p. 9). Stiggins (2007a) reported that when students are given a target that is clear and actionable, they are more likely to reach their target. Students benefit from knowing what they will be expected to learn and what they will be assessed on. Knowing this target gives students a better chance of hitting the target and helps the teacher develop a focus for instruction.

Implications

What implications do the findings of this study offer to educators? Overall, teachers who teach in schools of poverty see the benefits from standards-based report cards in areas of communication, student mindset, and student assessment. The results for teachers in schools of affluence seemed mixed, but they did demonstrate the belief that traditional report cards seemed to benefit them more than standards based in regard to communication from the viewpoint of the teacher. The other three areas did not demonstrate significant difference and speculation on the true feelings of teachers within schools of affluence would not be appropriate. The other three areas did not demonstrate significant difference and speculation on the true feelings of teachers within schools of affluence would not be appropriate. Given this information, how do educators respond? There are some findings of the study that offer some actionable areas educators need to be addressing within their school community.

Communication between parents and teachers is not an option. It is assumed by educators that affluent parents care about the education of their children. According to findings

and research, parents of students in poverty also care about the education of their children. Parents of all students should know the learning goals of their child(ren). This information helps them support the learning of their child(ren). Since parents of affluence have more access to money, they often can offer their children more opportunities for learning outside of school (Duncan & Murane, 2014). This does not mean that parents of students in poverty do not care about the education of their child(ren) (Dweck, 2006). The findings of this study support that teachers believe parents care about the education of their child(ren).

The question for educators then is what actionable steps are being taken to support communication? Are parents and students aware of curricular and specifically student learning goals? Are goals offered in understandable language to parents and students? Are teachers comfortable with sharing not only where a specific child is performing with the student and with a parent, but also what the next steps for learning are? Are teachers offering feedback to parents and students? The findings of this study and other research support the idea that feedback is important to a student's growth and learning. Tomlinson (2005) found that feedback on the letter grade helps students more than letter grades, and 91% of teacher respondents agreed. Are district-level leaders providing the expectation, opportunity, and support for these conversations to occur? How often do these conversations occur? If students are expected to learn, everyone involved in their education must be prepared to offer the support and opportunity for that learning to take place. Communication needs to be ongoing to be effective; educators must be given the expectation and offered the support for this to occur.

District leaders should also examine the reporting method they support. Research suggests that grading has undergone changes throughout history. Although written feedback was the means of communication of student progress in early years, letter grades were offered as a

means of addressing an influx of students into the school system. Yet from the beginning, letter grades based on percentages were brought into question (Finklestein, 1913). For years, the mechanistic industry allowed schools to produce students accustomed to letter grades, because ranking of students was sufficient for the workforce. However, in the 21st century, meaningless letter grades (Kohn, 1999) are no longer sufficient to communicate what students are learning to students, parents, or the community students enter upon graduation. Although 58% of teachers who responded agreed letter grades allow parents to understand and support the learning process, according to research by Guskey & Jung (2012), Kohn (1999), and Tomlinson (2005), this is due to more familiarity with letter grades than actual understanding of achievement. Traditional reporting has allowed teachers and educators to accumulate a variety of sources of student work into a single omnibus grade for each skill area (Marzano & Heflebower, 2011). This omnibus grade allows student performance on skills to be combined with external factors, such as attendance, completion of assignments on time, extra credit, and extra projects to muddy the actual skill level of the student. The purpose of using standards-based grading is to align grading practices with content standards by measuring and reporting a student's proficiency (Oliver, 2011). Overall, the standards-based cards seek to remedy the omnibus grade by providing clarity regarding student achievement. District-level leaders should lead the discussion as to what they are actually communicating to their constituents and school community. Parents expect/trust the school/teacher to offer formative and ongoing assessments to their child(ren). Parents expect the assessment of their child(ren) to accurately reflect what their child(ren) knows and can do.

District and building leaders must also provide a solution to the discrepancy that often exists between letter grades and student achievement as measured by summative tests. Ongoing curriculum that is used for creating lessons for students should be offered at a district level, and

that curriculum should be supported by ongoing formative assessments and should support end-of-year assessments. These assessments should be clearly communicated to parents so that parents of all levels of education and income know the expectations their child(ren) are expected to attain. Is this communication an actionable part of intentional communication or a hopeful expectation? District leaders must lead their staff in making it an intentional piece of communication at all levels.

Very little discussion has been offered to educators regarding mindset. Mindset not only affects students, but mindset affects teachers and parents. Teacher expectations influence the learning of their students (Dweck, 2008). This is of particular importance to teachers in schools of poverty. If teachers expect less of their students, they accept less from their students. This is educationally dangerous, especially to students in schools of poverty. Parents of students in schools of poverty likely have less education and less means to provide academic interventions for their child(ren) outside of school (Duncane & Murane, 2014). Yet the child(ren) have the same expectations for summative assessments as other students do. It is incumbent upon teachers, especially those working with students in schools of poverty to communicate learning goals. Teachers of students in schools of poverty need different skill sets for providing instruction. Students in schools of poverty benefit from work that is more interactive with less lecture; they benefit from meaningful, specific criteria with specific next steps. Standards-based report cards offer more specific criteria than traditional report cards, and this was recognized in this study by teachers of students in schools of poverty and schools of affluence. District leaders at all levels should discuss standards-based reporting with their teachers and parents as a means to clear communication of achievement.

Educators are able to do offer learning experiences to children, yet children must make the decision to accept those opportunities. Teachers would benefit from further understanding of the mindset of students. One key piece that teachers must understand is that they must offer opportunities for students to be successful. Looking smart is important to student learning; otherwise they will shut down and learning will be shut off (Dweck, 2008; Ricci, 2013). Students are motivated when they see themselves as learners; success breeds success. If educators/teachers are able to build success into the goals for students, letting them know where they are, where they need to go, and the next step to get there, students are more likely to reach their goal (Stiggins, 2007a).

The area of student assessment in this study is specifically tied to learning goals, engagement of students, and how students are assessed. One implication for all educators is that engagement of students is key to students' learning. Students may have an inner motivation to learn which is intrinsic motivation. However, not all students have this inner motivation, and intrinsic motivation may change across time. Therefore, parents and educators turn to extrinsic motivation, or types of rewards, to learn. Extrinsic motivation can work for some students; however, it does not work for all students and/or does not work all the time. Student engagement is the key for students regardless of the form of motivation, whether intrinsic or extrinsic. The question for educators then becomes how to engage students in their learning. Some questions educators must ask themselves include, but are not limited to, these two: "How do I recognize student engagement?" and "How do I foster student engagement?"

The findings of the study have offered some pieces of student engagement that offer insight.

1. Students need to know their learning targets/learning goals.

2. Students need to be engaged in creating their personal learning goals.
3. Students should be allowed to redo assessments/ assignments without penalty.

These are supported by the research of O'Connor (2009), Stiggins (2007a), and Reeves (2011). Standards-based report cards support breaking learning into areas of skill, which are reported to students and parents, rather than an overall grade for a subject as reported by traditional report cards. District leaders and educators at all levels need to look at the message their reporting system is conveying. Do students, parents, and the community understand the actual achievement presented by the current reporting system? If the answer is anything but yes, a commitment to further study of the reporting system should be undertaken.

Recommendations for Future Research

This study just touched on the impact of standards-based reporting and its possible impact for students in schools of poverty, as well as students in schools of affluence. As the standards-based reporting movement expands, it would be worthwhile to study the achievement of students in schools of poverty both with the report cards and achievement as measured by standardized tests. If standards-based reporting is truly impacting student achievement, standards-based testing should also reflect that growth.

The report offered in this study discussed parent communication; however, this is reported as seen through the eyes of the teachers. Research into communication from the actual interview of parents would be worthwhile to study. Teachers report grades to parents, but what do the parents understand the grades to mean? Do parents truly understand how their children are achieving, or are grades of current students compared to grades received by the parents when they were students? Do stakeholders view grades through the perspective of what was done to them, or is there an understanding of achievement?

Standards-based grades break down elements of learning and should offer a more direct relationship to summative, standards-based test results such as end-of-year testing. For too long, report card grades have led students/parents/other stakeholders to believe students are doing well or doing poorly, only to receive summative test results with differing views of achievement. Which form of reporting offers the most informative insight into the achievement of students? Stakeholders need to receive actionable and informative information that consistently reports student achievement and growth. Implications of these findings are of particular importance to teachers in schools of poverty, as the use of standards-based report cards are significant when teachers look at Student Assessment, Teacher Communication, Parent Communication, and Student Mindset. Although traditional report cards actually show significance in one area (Teacher Communication) for one student group (schools of affluence), more consideration should be given to the use of standards-based report cards for all students. In Indiana, respondents at this time indicated 217 teachers (48.2%) still use traditional report cards and 233 teachers (51.8%) currently use standards-based report cards. Corporations and teachers should consider the use of standards-based report cards, especially if schools within their district are schools of poverty. Such a change in reporting system would necessitate discussions by adult stakeholders in the school community; however, the benefit to students should drive at least consideration of the use of standards-based reporting.

Recent research studied the importance of a growth mindset both for teachers and for students. Student engagement is a buzzword that flows across all levels of education both in practice and in research, and students with a growth mindset are often seen as students who are engaged (Dweck, 2008; Ricci, 2013). However, classrooms are filled with both students of growth mindset and students with a fixed mindset. Little training has been offered to educators

(or parents or students) in the area of identifying student mindset. Even less professional development or training has been offered on how to help students, parents, and teachers with fixed mindsets move toward a growth mindset. Research in this area could involve assessing mindset and achievement using both a pre- and post-test, offering training, and then determining the impact of the training on student achievement after instruction in the area of growth mindset characteristics.

This study asked teachers their experience with traditional or standards-based report cards. There may be teachers who have experience with both types of reporting. What does their experience offer to the debate? What insights might they offer to the discussion of communication and student assessment? Does the level of poverty impact the form of reporting in a significant way? Does the reporting system impact the level of feedback they offer to students or to parents?

Finally, what about the stakeholders? No one has asked for input from students in order to compare their understanding of their learning targets and their achievement of those targets. Is there a relationship? The study asked teachers about parent communication. What would parents say about the communication of their child(ren)'s learning targets and how well they understand where their child(ren) are achieving? Do parents have experience with both types of reporting systems, and if so, what are the strengths or weaknesses of each? An often forgotten stakeholder is the next level for the student, whether the college, workplace, or other training. Do stakeholders understand the meanings of each reporting system and does one offer more information than the other?

Summary

This quantitative study was conducted to determine if there is a difference between standards-based reporting methods and traditional reporting methods. The study utilized the lens of students in schools of poverty and students in schools of affluence to look at the areas of assessment, communication from both teacher and parent viewpoint, and student mindset. A significant difference was found between standards-based reporting and traditional reporting in the areas of assessment, communication from both teacher and parent viewpoints, and student mindset, specifically when using the lens of schools of poverty. Assessment and communication from the viewpoint of teachers were also significant for schools of affluence. Overall, standards-based reporting had a higher mean than traditional reporting in both areas of communication and in the area of mindset for schools of poverty. Assessment had a higher mean for both traditional and standards-based assessment for all students.

This study offers evidence there is a significant difference between standards-based report cards and traditional report cards for students in schools of poverty. Standards-based report cards are seen as significant in the areas of teacher and parent communication, student mindset, and student assessment. In the area of assessment, standards-based report cards are also significant for students in affluent settings. The only area reported as significant for traditional report cards was in teacher communication. For students in affluent settings, parent communication and student mindset did not offer significant findings for either standards-based report cards or traditional report cards. Overall, standards-based report cards offer significant findings and should be considered when educators are looking at communication, assessment of students, and student mindset.

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APPENDIX A: CONSENT TO PARTICIPATE IN RESEARCH

Traditional and Standards-Based Reporting of Student Achievement

You are being invited to participate in a research study about the impact of traditional and standards-based report cards on student achievement. This study is being conducted by Paula Concus, a doctoral student in the Education Department at Indiana State University as part of a dissertation study. You were selected as a possible participant in this study because you are a teacher of elementary students in the state of Indiana.

There are no known risks to participating in this research study. There are no costs to you for participating in the study. The information you provide will be used to determine if grading practices have an impact on communication of achievement, assessment of students, and student mind-set. The questionnaire will take about 10 minutes to complete. The information collected may not benefit you directly, but the information learned in this study should provide more general benefits.

This survey is anonymous. No one will be able to identify you or your answers, and no one will know whether or not you participated in the study. Individuals from the Institutional Review Board may inspect these records. Should the data be published, no individual information will be disclosed.

Your participation in this study is voluntary, and your IP address will not be collected, however absolute anonymity cannot be guaranteed over the Internet. No one will be able to identify you or your answers, and no one will know whether or not you participated in the study. Please note that the name of the school in which you work will not be collected in the survey. The names of the schools or districts will not be revealed in the final document. By completing this survey and submitting your answers to the following questions, you are voluntarily agreeing to participate. You are free to decline to answer any particular question you do not wish to answer for any reason. If you wish to withdraw from participation in this survey, you may exit the survey by closing your browser at any time.

If you are willing to participate in this survey, please click the arrow at the bottom of this page. If you have any questions about the study, please contact:

Paula Concus, 4587 E Co Rd 00 N S, Kokomo, Indiana 46901, (765) 454-7030, or by e-mail pconcus@kokomo.k12.in.us, or contact my dissertation chair, Dr. Terry McDaniel, Indiana State University, University Hall Room 211G Terre Haute, In 47809 812-237-3862 tmcdaniel@indstate.edu

If you have any questions about your rights as a research subject or if you feel you've been placed at risk, you may contact the Indiana State University Institutional Review Board (IRB) by mail at Indiana State University, Office of Sponsored Programs, Terre Haute, IN, 47809, by phone at (812) 237-8217, or by e-mail at irb@indstate.edu.

By clicking the arrow below, I agree to participate in this survey.

APPENDIX B: TRADITIONAL AND STANDARDS-BASED REPORTING SURVEY

Reporting Methods Survey

Q1 Parents care about the education of their child(ren).
- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Somewhat Disagree
- ❍ Somewhat Agree
- ❍ Agree
- ❍ Strongly Agree

Q2 Feedback on a student's work is more helpful to students than a letter/ number grade.
- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Somewhat Disagree
- ❍ Somewhat Agree
- ❍ Agree
- ❍ Strongly Agree

Q3 Students in my classroom know their learning target(s).
- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Somewhat Disagree
- ❍ Somewhat Agree
- ❍ Agree
- ❍ Strongly Agree

Q4 Public schools help level the playing field for all students.
- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Somewhat Disagree
- ❍ Somewhat Agree
- ❍ Agree
- ❍ Strongly Agree

Q5 The process of learning is more fascinating than the content of learning.
- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Somewhat Disagree
- ❍ Somewhat Agree
- ❍ Agree
- ❍ Strongly Agree

Q6 The expectations of the teacher influence the achievement of his/her students.
- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Somewhat Disagree
- ❍ Somewhat Agree
- ❍ Agree
- ❍ Strongly Agree

Q7 The ability of a student to learn remains relatively constant throughout school.
- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Somewhat Disagree
- ❍ Somewhat Agree
- ❍ Agree
- ❍ Strongly Agree

Q8 Looking smart to peers is important to student learning.
- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Somewhat Disagree
- ❍ Somewhat Agree
- ❍ Agree
- ❍ Strongly Agree

Q9 Students who are smart do not need to put forth effort.
- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Somewhat Disagree
- ❍ Somewhat Agree
- ❍ Agree
- ❍ Strongly Agree

Q10 Students are motivated when they see themselves as learners.
- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Somewhat Disagree
- ❍ Somewhat Agree
- ❍ Agree
- ❍ Strongly Agree

Q11 Incentives produce learning just as engagement produces learning.
- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Somewhat Disagree
- ❍ Somewhat Agree
- ❍ Agree
- ❍ Strongly Agree

Q12 It is important for students to help create learning goals.
- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Somewhat Disagree
- ❍ Somewhat Agree
- ❍ Agree
- ❍ Strongly Agree

Q13 Letter grades offer the incentive for students to learn.
- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Somewhat Disagree
- ❍ Somewhat Agree
- ❍ Agree
- ❍ Strongly Agree

Q14 Parents view report card grades as how well their child is achieving.
- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Somewhat Disagree
- ❍ Somewhat Agree
- ❍ Agree
- ❍ Strongly Agree

Q15 Test scores are accurate measures of student achievement.
- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Somewhat Disagree
- ❍ Somewhat Agree
- ❍ Agree
- ❍ Strongly Agree

Q16 Formative, ongoing assessments are key elements of instruction.
- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Somewhat Disagree
- ❍ Somewhat Agree
- ❍ Agree
- ❍ Strongly Agree

Q17 Parents in my class know the learning goals of their child.
- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Somewhat Disagree
- ❍ Somewhat Agree
- ❍ Agree
- ❍ Strongly Agree

Q18 Report card grades reflect academic achievement, effort, behavior, and motivation.
- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Somewhat Disagree
- ❍ Somewhat Agree
- ❍ Agree
- ❍ Strongly Agree

Q19 Students are allowed to redo assignments/ assessments without penalty.
- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Somewhat Disagree
- ❍ Somewhat Agree
- ❍ Agree
- ❍ Strongly Agree

Q20 Grades allow parents to clearly understand and support the learning process.

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Somewhat Disagree
- ❍ Somewhat Agree
- ❍ Agree
- ❍ Strongly Agree

Q21 Parents support educational opportunities for their child(ren) outside of the school day.

- ❍ Strongly Disagree
- ❍ Disagree
- ❍ Somewhat Disagree
- ❍ Somewhat Agree
- ❍ Agree
- ❍ Strongly Agree

Q22 Which type of reporting system (usually referred to as "report card") is used in your building?

- ❍ Traditional
- ❍ Standards-Based

Q23 How many years have you used this type of report card?

- ❍ Less than three (3) years
- ❍ Three (3) years or more

Q24 What is the Free/ Reduced percentage of students in your building?

- ❍ Above 50%
- ❍ 35% - 50%
- ❍ Below 35%