STANDARDS-BASED REPORT CARDS BENEFITS AND CHALLENGES

A Doctoral Capstone Project

Submitted to the School of Graduate Studies and Research

Department of Secondary Education and Administrative Leadership

In Partial Fulfillment of the

Requirements for the Degree of

Doctor of Education

Gregory Mandalas

California University of Pennsylvania
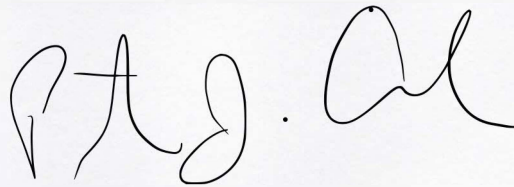
August 2020

California University of Pennsylvania

School of Graduate Studies and Research

Department of Secondary Education and Administrative Leadership

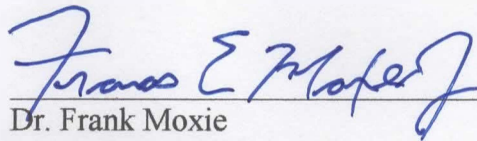We hereby approve the capstone of

Gregory Mandalas

Candidate for the Degree of Doctor of Education

14 JUL 2020

Dr. Peter Aiken
Adjunct Faculty
Doctoral Capstone Faculty Chair

7/14/20

Dr. Frank Moxie
Principal, South Butler County School District
Doctoral Capstone External Committee Member

Table of Contents

List of Figures

Abstract

This study was designed with the goal of informing a decision for the South Butler Primary School to adopt standards-based report cards or to continue with traditional report cards. School districts in Western Pennsylvania that had already adopted standards-based report cards were studied. A questionnaire was created that was designed to answer three research questions regarding standards-based report cards. The first research question was designed to learn more about the challenges of implementing standards-based report cards. Research indicated that there are several challenges, but solutions to these challenges are readily available. The second research question was designed to learn more about academic benefits students receive when a standards-based report card is in place. While a correlation between high standardized test scores and standards-based report cards could not be shown, there was evidence that students and teachers are more focused on standards when a standards-based report card is in place. The final research question was designed to learn more about whether a standards-based report card better informs an end user when compared to a traditional report card. It was clearly shown through this research that a standards-based report card does better inform an end user when compared to a traditional report card, however the end user must be well educated on the topic.

CHAPTER I

Introduction

Identifying Information

Doctoral Student Name: Gregory Mandalas

Project Title: Standards-Based Report Cards Benefits and Challenges

Faculty Capstone Committee Chair: Dr. Peter Aiken

External Capstone Committee Member: Dr. Frank Moxie

Capstone Project Dates: June 2019 to August 2020

Reflection

There is a focus across the country and in Pennsylvania on the alignment of local curricula to state standards within public schools. While most schools have worked to align curricula to standards, many have not updated their grading system to be reflective of the change. I am a principal at the South Butler Primary School within the South Butler County School District. Currently, our school uses a traditional letter grade report card. The current report card at the South Butler Primary School does not fully inform users as to a student's progress regarding specific standards. This project will research the benefits and challenges of standards-based report cards.

Initial Actions

This research will be conducted using a quantitative approach. Before beginning the data collection process, literature on the subject of standards-based report cards will be reviewed. Next, interviews and surveys will be conducted with school leaders who have been through the standards-based report card adoption process. Survey results will be quantified to determine the

benefits and challenges of adopting a standards-based report card. Data will be collected

regarding student performance under both traditional and standards-based report cards. The data

will be quantified to determine if there is a correlation between student performance and

standards-based report cards.

Desired Outcomes

Surveys will be given to district leaders who have adopted standards-based report cards.

The data collection instrument will focus on the benefits and challenges experienced during and

following the adoption process. Results will be quantified and later analyzed. Survey questions

will also be designed to determine whether student achievement increased following the adoption

of standards-based report cards. The survey used for this project will be created by the

researcher unless a suitable existing instrument can be found.

Data from the survey will be categorized based on the specified research questions. After

quantifying the results, charts and graphs will be created to express the results. Benefits and

challenges that are faced by districts that adopt standards-based report cards will be listed.

Possible solutions to challenges will be presented. Academic benefits will be quantified and

recommendations will be made for districts considering the adoption of standards-based report

cards. Finally, a recommendation will be given with regard to the specific adoption of a

standards-based report card for the South Butler Primary School.

Below is a projected timeline:

Planning Stage- June 2019 to August 2019-During this stage, the problem statement will be

refined and data collection methods will be identified.

Acting Stage- September 2019-December 2019-During this stage, literature will be reviewed and

the survey tool will be developed.

Developing Stage- January 2020-May 2020-During this stage, the data will be gathered and organized.

Reflecting Stage- June 2020-August 2020-During this stage, recommendations and implications will be identified. The capstone project will be formally presented at California University of Pennsylvania.

Financial Implications

If a switch to a standards-based report card occurs, there will be financial implications for the South Butler County School District. First, in order to successfully implement the transition process, a team of teachers will need to visit other school districts that have already implemented standards-based report cards. When these teams are visiting other districts, substitute teachers will need to be employed. Depending on how large the team is, the costs for substitutes could range anywhere from $500 to $1,000 per day.

Additional technology costs will incur as the districts switches from a traditional report card to a standards-based report card. The current Student Information System (SIS) used by the South Butler County School District is known as Skyward. The company that produces the current SIS will require fees to cover the costs of transitioning to a new format. It is estimated that these costs will be from $1,000 to $3,000.

There are additional costs in wages for the research and processing work to make the transition from a traditional report card to a standards-based system. These costs include the hourly rate for hourly employees to work on the transition project as well as the daily costs for salaried employees. This number is hard to estimate but it could be anywhere from $5,000 to $15,000.

Research Questions

This research project will attempt to answer three questions.

1. What challenges are faced by schools that implement standards-based report cards?

2. Do students experience academic benefits when standards-based report cards are adopted?

3. Does a standards-based report card better inform users perceptions as to a student's progress with regard to specific standards when compared to a traditional report card?

CHAPTER II

Literature Review

Introduction

This review of scholarly literature on the subject of standards-based report cards is designed to provide an overview of the important work that has been done thus far. The effects of standards-based report cards on teaching will be focused on and an overview of historical grade reporting reform efforts will be provided. The standards-based report card implementation process will be reviewed along with challenges districts face. Finally, student benefits from standards-based report cards will be examined along with literature on school and community culture.

Grade Reporting Reform Efforts

The use of letter grades is commonplace within the educational system in the United States. However, the practice of assigning a letter grade to represent student achievement is not how students were originally assessed. Teachers in early public educational systems in the United States reported progress through narratives and skill statements (Hargis, 2003). Prior to the mid-nineteenth century, competency of skill statements were used to determine a student's ability to be successful as an apprentice or for acceptance into a system of higher education. Under this system, there were no letter grades as there are now.

After the mid-1850s, the United States saw an increase in schools that were supported through public taxes. As the number of tax-supported schools increased, the number of students increased as well. During this same time period, the United States began to focus more on industry. Within many industries, a letter system was used to signify quality of materials or workmanship. A piece of work that was labeled as "A" would be considered superior to work

that was labeled as "B." This letter system was adopted by teachers in taxpayer funded schools in response to an overwhelming increase in student population as letter grading was more efficient than writing narratives (Stiggins, 2005).

As the use of letter grades became common place, parents began to expect them. Students were labeled as "A" students or "B" students. Children who grew up under the letter system expected letter grades for their own children once they became parents. The system is so commonplace in the United States that many parents are taken aback when districts move to other systems (Guskey & Bailey, 2010). Perhaps because of comfort and tradition, most schools have not explored alternatives to traditional grading systems even though many scholars agree that there is a lack of clarity for parents when letter grades are used as each letter grade comes with little meaning (Bowers, 2011).

There is a movement in the United States to move away from traditional letter grades and to embrace an approach that measures student progress in specific areas. States across the country have adopted a standards-based approach to teaching and learning (Guskey, 2004). Under a standards-based system, teachers focus on objectives that are based upon standards that are created at either the state or local level. It stands to reason that when students are being measured by their ability to achieve a certain standard, their progress could be reported based on the same standard rather than a letter grade. This approach has commonly been called standards-based reporting.

While the standards-based movement continues to be debated across the country, there are pros and cons to the system. In order to completely understand a standards-based approach versus a letter grading approach, it is important to understand the history behind each system. Traditional letter grading has become the expected practice. In order for expectations to change,

districts must demonstrate that a standards-based approach is better for students and parents. As district leaders explore options to better inform parents as to a student's progress, it may be valuable to districts to explain the history behind each system before implementing change.

Research on Standards-Based Instruction

The research on standards-based instruction is deep. Most states have standards in place that teachers are required to teach to. While standards seem to be almost universally accepted, standards-based reporting systems still faces challenges. Even though it seems obvious that schools that base their instruction on standards would adopt a standards-based reporting system, research indicates that many administrators feel that they lack the time or knowledge to implement such a system (Guskey & Bailey, 2010). In order to better understand standards-based reporting, it is important to first understand why it is important to teach to standards.

When teachers adopt a standards-based approach, they are insuring that students are able to understand and to apply what has been deemed as important or relevant to their success. In Pennsylvania, a committee of teachers and other stakeholders agreed upon a set of standards that were to be common to every school in the state. In 2013, students were assessed on these standards which became know as PA Core Standards. Pennsylvania adopted a standards-aligned system (SAS) that teachers are using today. By creating standards that every student is held to, the state of Pennsylvania is working toward a common goal of student proficiency.

Most research indicates that a standards-based approach increases student achievement (Aidman, 2001; Guskey, 20014; Marzano, 1996). The most recent movement toward a standards-based approach can be traced back to the federal government oversight during the Regan administration of the early 1980s. In 1983, the United States National Commission on Excellence in Education submitted a publication called *A Nation at Risk.* This report focused on

raising standards for all students. A movement to hold teachers more accountable began and a focus on standardized testing was launched.

From the early 1980s until today, the pendulum for and against standardized testing has continually swung. Depending on politics, people are passionately for or against standardized testing. While this debate continues, most educators still agree that standards are important (Salend, 2005). By focusing on standards, educators have a better chance of increasing student achievement and success as the focus of each lesson is grounded in what students need to know or to be able to do.

Standards-Based Reporting

While standard-based instruction has become commonplace in the United States, most districts still rely on a traditional letter grade system to report on student progress. As mentioned above, many administrators feel they have a lack of time or knowledge to fully implement a standards-based report card. Yet, the research on the benefits and challenges of such an implementation is vast.

Effects on Parents

There is no doubt that open communication is important to parent and teacher relationships. Guskey (2001) wrote that while communication remains an issue for school districts, the implementation of a standards-based grading system can be helpful. When parents are given more detail regarding strengths and weaknesses of students in specific areas, they feel better equipped to help their children (Winger, 2005). The idea that parents want to know as much about their students' academic progress is not surprising. It stands to reason that parents who care about their kids would want to know how to best help them.

In other research, Colby (1999) found that standards-based instruction and grade reporting can lead to better parent communication. Parents reported that they feel a stronger connection to the school when standards-based reporting is utilized (Colby, 1999). This is especially true when academic and nonacademic factors are both listed (Marzano & Heflebower, 2011). By listing both academic and nonacademic factors, parents are likely to relate more easily to the information presented. Many elementary schools have done this for years as a way of reporting on a students' social and emotional progress in addition to their academic progress.

The research seems to clearly indicate that standards-based reporting is beneficial to parent communication. However, even with this research firmly established, many districts still use traditional letter grade report cards. It is important to understand why districts choose not to change to standards-based report cards even when the research is so overwhelmingly supportive. From a parent perspective, challenges should be analyzed.

When examining the challenges that relate to parents and their perspective of standards-based reporting, a non-educational mindset must be adopted. Parents are not fully aware of educational terminology as they do not use it daily. While Guskey (2001) believes that parents will only understand the value of a standards-based approach when that understand how standards are used to improve student achievement, most parents will need to be educated themselves before the implementation process begins. The burden falls on district leadership to fully inform parents as to what a standards-based system looks like and how it can help parents and students.

When educating parents as to the benefits of a standards-based reporting system, it may be valuable for educators to discuss the history behind grading systems. As mentioned earlier, early schools reported student progress through narratives. Later, the system was changed to

what is recognized as traditional letter grading. By educating parents about the history of each

system, it is possible that they will be more receptive to the change. Marzona and Heflebower

(2011) wrote that parents have little insight into a student's academic progress under the

traditional letter grading system. Research such as this will be important to the conversation

educators have with parents as they work to explain the reasons behind changing from traditional

letter grading to a standards-based system.

Parents may be concerned that a standards-based system will lead to misinterpretations of

how well a student is doing academically (Cizek, 2000). Teachers may have similar sentiments

when making the change to a standards-based system. It is important to remember that with any

change, there is a process to be followed. Skilled leaders need to account for these concerns as

they work to establish the change.

Finally, parents may be resistant to a change to a standards-based system out of

convenience. Parents know and understand letter grading. They enjoy being able to identify

their students as being successful by associating a letter grade with their progress. By moving

away from a letter grading system, parents may feel alienated. Undoubtedly parents will ask

what letter grade is associated with any narrative that is provided. Again, the burden will fall on

district leaders to fully educate parents so that they are comfortable with a standards-based

system.

Standards-Based Report Card Implementation Obstacles

Perhaps the single biggest challenge to adopting a standards-based report card is the

enormous task of implementing the system. First, stakeholders must agree that a standards-based

approach is appropriate. Guskey (2011) points out five main obstacles to grading reform. Each

should be examined before undertaking the task of a switch from traditional grading to a standards-based system.

The first obstacle is overcoming tradition. There is a belief that grades should be used to differentiate successful students from those who are not. Parents want to be able to rank their students based on a grade as well. When switching to a standards-based system, students are not ranked in an easy to view way. Rather students are informed as to their progress with specific standards. This tradition is very difficult to move from as it requires a complete paradigm shift for stakeholders.

The second obstacle pointed out by Guskey (2011) is the fact that people believe that grade distribution should resemble a bell-curve. Stakeholders feel that some students are very smart, some are smart, and some are not smart at all. With this type of thinking, a bell-curve would be a natural result. However, schools are to be intervening when students are struggling. By providing meaningful interventions, the goal is for all students to achieve. Rather than a bell-curve, schools are designed to produce students who can each be successful (Hanushek, 2004).

The third obstacle pointed out by Guskey (2011) is that parents are used to a norm-based system of grade reporting. For example, a student who earns a "C" is considered an average student. A student who earns an "F" is considered a below average student. This creates a spirit of competition that can sometime be damaging (Krumboltz & Yeh, 1996). Some parents enjoy this type of competition and encourage it amongst their students. While healthy competition can be beneficial, students in a standards-based system are viewed as being on the same team with the same goal. Every student is expected to achieve.

Another obstacle to the implementation process is the belief that poor grades prompt students to try harder. Many studies show that students avoid poor grades to protect their self-

image (Selby & Murphy, 1992). In order to avoid students feeling shame, many schools have decided to not give failing grades at the primary level. While the idea of promoting a positive self-image is worthwhile, schools are not giving an accurate measure of achievement when they refuse to give failing grades. While giving failing grades may indeed encourage students to try harder, it does come with some damage to personal image, especially at the primary level.

Finally, stakeholders may believe that students should receive one grade for each subject. Under a traditional grading system, grades for different portions of each course may be weighted. This allows more emphasis to be given to what is deemed as being more important. Under a standards-based system, each standard holds the same value. This eliminates the idiosyncrasies that a traditional weighting system may have (McMillian, 2001).

While the obstacles to a switch to standards-based systems may be vast, there are steps that administrators can take to ensure success. By understanding what the obstacles are, leaders have a better chance of designing a plan to implement a program with fidelity. Administrators should be aware of the challenges of implementation and should work hard to work proactively to avoid possible negative issues.

Administrative/Board Decision Making

When administrators and school boards are deciding whether they should switch to a standards-based reporting system, research into the topic should be reviewed. Both groups should independently study the body of literature that exists before meeting to discuss the merits and challenges of standards-based report cards. As with other decisions that impact students, there are several factors that should be decided upon before moving into the adoption phase of standards-based reporting.

First, administrators and school boards must agree upon what a standards-based reporting system is. They must understand that teachers will have to have explicit criteria upon which to base their grades (Guskey, 2006). A plan should be derived that allows teachers and administrators to collaborate to establish common grading procedures and rubrics. Time for professional development must be in place before a decision can be made. Teachers will need to practice grading work using the established rubrics to ensure that practices are universal across grade levels and buildings.

Most states already have standards in place that teachers are familiar with. The list of standards for each state may likely be very long. Research indicates that parents and teachers feel overwhelmed with information when they are given more than six standards for a given subject area (Guskey & Bailey, 2001). Administrators, board members, and teachers will all need to collaborate to decide upon the standards that will be reported. Again, there must be time for this type of collaboration built into the adoption plan.

A conceptual framework should be provided that allows leaders and stakeholders to define the process of adoption. There is a large amount of research on different frameworks, but one of the most popular is the *Transformation of Intentions* framework (Hall & McGinty, 1997). Under this framework, leaders have a detailed plan for transforming an idea into policy. Whether leaders use this framework or some other, the goal is to work backwards with the goal in mind. Leaders should plan on having successfully implemented a standards-based reporting system by a given date and then work in reverse to plan the necessary steps that should be taken to achieve their goal.

Teacher Buy-In

Before implementing a change to a standards-based reporting system, teachers need to be educated as to what a standards-based reporting system is and how it can benefit them and their students. Teachers will be the primary force in the success or failure of a transition to standards-based reporting, so it is essential that they fully support the process. Skilled administrators understand the power of buy-in as it relates to teachers and change. Research indicates that there are certain steps administrators can take to create buy-in and to increase the chances for a successful transition.

First, administrators must understand the possible opposition that teachers will have to a standards-based system. While research indicates that a traditional letter grade system is not as clear when compared to a standards-based system (Cox, 2011), some teachers will still be opposed to making a change. As mentioned earlier, traditional letter grading is the system that most educators were exposed to as children. This is also the system that most educators were trained in through teacher preparation programs. In order to change from a traditional letter grading system to a standards-based system, there must be clear evidence that a standards-based system is better. Without evidence, administrators are unlikely to have their teachers fully support change.

In some schools, teachers may be using letter grades as a form of punishment or reward. While this certainly was never the intention behind the grading process, it is important for administrators to understand that without direct instruction, teachers may have taken it upon themselves to define what a particular letter grade means. For example, teachers may be using behavior as a factor when assigning a letter grade. While the body of research indicates that this

is a poor practice (Marzano, 2010), certain teachers will be opposed to relinquishing this power in favor of a standards-based system.

It is important that teachers and administrators agree on the purpose of grading. When studying the historical nature of assigning grades, civilizations have used results to determine job competency, scholarship, and hierarchy placement. Teachers need to agree that the purpose of reporting achievement results is to inform stakeholders so that decisions can be made that benefit students. Letter grades simply report overall achievement rather than detailed results (Brookhart, 2011).

In order for teachers to buy-in to the standards-based reporting approach, they must be willing to forgo secondary purposes for grading. For example, grades should not be the sole determining factor in a student's qualification for learning support. Some teachers feel that a student must have "Fs" on their report card if they are to qualify for additional supplemental supports. Administrators should make it clear that when a switch to a standards-based system happens, there will still be a mechanism for learning support qualifications.

Professional Development

Professional development will be key to the success of any standards-based reporting implementation system. Teachers should be given the opportunity to explore other districts who have adopted a standards-based approach. Administrators and teachers should work together to develop a framework for the implementation process along with professional development. Teachers should have time to practice grading using a standards-based approach and all stakeholders should agree upon common assessments.

A standards-based approach works well when working in concert with other systems that schools may already have in place. For example, many schools are working to establish a system

of multi-tiered supports. In many schools, this system is known as MTSS (Multi-Tiered System of Supports). The MTSS process works well with a standards-based system because schools know exactly where students are struggling and which standards they have mastered. Interventions can then be targeted to meet the needs of each individual student.

For schools that already have other systems in place such as MTSS, it is important for professional development to train teachers regarding how the two processes align. Teachers quickly lose interest in a new initiative when they believe it is counterproductive to what is already working within a building. Principals and other leaders should be sure that the professional development that is provided aligns well with core beliefs that are already established at the building and district level. Without this alignment, any initiative for a standards-based reporting system will be in jeopardy of failing.

Parent Buy-In

It is important that all stakeholders buy-in to the process of implementing a standards-based reporting system. Perhaps no other stakeholder group is more important to the success or failure of the implementation process than parents. Parents need to be informed that standards-based instruction provides a more consistent curriculum when compared to non-standards-based instruction (Marzano, 2007). By using research to reinforce the reasoning behind the switch to a standards-based reporting format, administrators and teachers will have a better chance at creating buy-in with parents.

As mentioned earlier, the letter grading system that is currently in place in most schools has become a tradition. When schools switch to a standards-based system, it is likely that parents will want to associate a letter grade with a given skill. For example, if a standards-based report card qualifies each standard as being secure, development or needs improvement, it is

likely that parents will try to assign a letter grade to each qualifier. They will likely associate the term secure with an "A" and needs improvement with an "F." Administrators should have a plan in place to address this thought process and to encourage parents to think deeper about standards rather than letter grades.

Class rank will likely be an issue that concerns parents of high school students when implementing a change to a standards-based system. Guskey and Jung (2012) proposed that a solution to this would be to eliminate class rank entirely. Many parents would be opposed to this idea. Other solutions include assigning a rank based on secure standards. A possible dilemma with this solution is that many students would hold the same rank, as top students would be secure with all standards. Administrators must think about solutions and offer approaches that would alleviate worry amongst parents. Many will be worried about how a standards-based approach effects college placement as well. Again, it is important to think through options before implementing a standards-based approach.

Finally, parents may be concerned that a standards-based approach is simply an excuse to not give students failing grades. As mentioned earlier, in some schools teachers are told that they are not allowed to give an "F" to a student who is at a certain grade level. This happens most often at the primary level. It must be explained to parents that a student who is not secure in a standard is failing to meet that particular standard. Clear expectations must be made regarding retention. Guidelines must be given so that parents and teachers both understand what constitutes a student failing a grade under a standards-based reporting system. By making expectations clear, administrators have a better chance of a successful implementation.

Standards-based grading has been shown to provide meaningful feedback to parents (Brookhart, 2011). Administrators should focus on this fact as they explain their reasoning

behind making the switch to a standards-based approach. By working to help parents understand

the benefits of the design, schools are more likely to find success. Administrators should be

proactive in their approach to questions. They should understand that parents will be concerned

mainly due to a lack of information.

Logistics

Research indicates that districts who work in advance to establish a procedure for an

adoption of a standards-based reporting system stand a better chance of success (Guskey &

Bailey, 2001). Some excellent research exists regarding the logistical process that many states

have used. One such example is the standards-based report initiative that Kentucky underwent.

In 2010, the state of Kentucky embarked on an initiative to help school implement standard-

based reporting systems. In order to make the work more efficient, leaders divided the task into

several areas.

First, procedures were developed that schools would follow. Educators started by

reducing the long list of state standards to only six standards per core subject. As mentioned

earlier, research indicates that standards-based report cards should limit the number of standards

addressed as to not overwhelm parents (Guskey & Bailey, 2001). In Kentucky, the final six

reporting standards that educators choose were very similar to the state domains that the state

had grouped by core subjects. Leading national organizations were used to develop standards in

other areas such as the National Association for Music Education.

In addition to including a marking for the six core standards, a process goal marking was

included as well. These process goals included an area for preparation, participation, homework,

cooperation, and respect. While being somewhat subjective and difficult to quantify, the process

goal marks likely allowed teachers to give a more complete representation of student

performance. In Kentucky, these process goals were reported with + and – symbols along with a key that identified marks as consistently, moderately, rarely, or not assessed. Standard marks included a number system to represent exemplary, proficient, progressing, struggling, or not assessed.

The elementary report cards in Kentucky included a rubric that allowed educators to quantify their marks. For examples, a mark for homework that was labeled as *Consistently* included a rubric that read that all homework assignments that were completed during the marking period were completed with a high level of accuracy. By using quantifiable terminology, standards-based report cards will likely be more consistent across a district.

Secondary report cards presented a greater challenge. Teachers that were involved with the creation of the standards-based report card were reluctant to abandon letter grades completely (Guskey & Bailey, 2010). This resulted with the inclusion of a letter grade for academic achievement that was used to calculate grade point averages. While this can be seen as a failure to fully implement a standards-based report card in its truest form, it is likely that the compromise was made in order to create the buy-in that was mentioned earlier.

Finally, Kentucky piloted the new standards-based report cards with just over 2000 students. Parents and teachers were then surveyed to gain feedback into the overall process. Some parents wrote that they were dissatisfied with the lack of percentage grades (Guskey & Bailey, 2010). The team took the feedback and incorporated it into future incarnations of the standards-based report card if the comment was useful to the goal of student achievement.

While Kentucky's system certainly had flaws, it is important to note that it was well thought-out in advance. The key takeaway from this research seems to be that a plan must be in place to account for the logistical obstacles that districts will face when implementing a

standards-based report card.   Districts can use other models that have been successful, but it may

be more advantageous for a district to create their own process in order to create the buy-in that

was mentioned earlier.

Student Benefits from Standards-Based Report Cards

The primary purpose for making any change within an educational institution should be

to improve student achievement. Teachers often lament that changes are made for no reason at

all. Before deciding to switch to a standards-based reporting system, educators must be certain

that students will indeed benefit from the change. The research on student benefits from a

standards-based reporting system is complex. While achievement is easy to quantify, student

sentiment and attitude are important to study as well.

Clymer and William (2007) studied a group of eighth-grade students who experienced a

shift from traditional grading to standards-based grading within their science courses. Research

results indicated that students who were exposed to the standards-based system reported having a

greater focus on the mastery of material when compared to those who had not. This may mean

that students hold a greater value to their work when it is connected to standards.

Standards-based report cards allow students to show where they excel, even when

standards are not completely secure. Traditional letter grades do not demonstrate what students

know. For example, a student who earns an "F" likely had many struggles with the material

presented. However, it is just as likely that this student did enjoy some success throughout the

lesson. By using a standards-based report card, educators can delineate various important

aspects of a given lesson. Guskey and Bailey (2010) believe that educators should use the

categories of product, process, and progress learning on each report card. Under this system,

product criteria grades relate to summative assessment achievement. Process criteria relate to

formative assessments including homework. Additional process criteria may include class

participation or attendance (Guskey, 2011). Progress criteria are based on student gain from one

lesson to the next. By weighting all three categories, a more complete picture of student progress

can be expressed.

There is research that seems to suggest that a traditional grading system can have a

negative impact on student motivation (Gusky, 2013; Roderick & Camburn, 1999). This is

likely because students who receive "Fs" may think of themselves as failures. Their parents only

see the "F" and are not informed about any successes the student experienced. As mentioned

above, it is unlikely that a given student did not experience any success during a series of

lessons. However, a traditional report card does not provide this detail. With a standards-based

report card, more detail is given as to where a student is enjoying success and where a student is

struggling.

With the current emphasis on positive behavior support, it would stand to reason that

students would be better motivated under a standards-based reporting system. By allowing for a

narrative, a teacher is able to give details with regard to exactly where a student is successful.

Teachers are also able to offer advice for parents as to what a student needs help with. For

example, a teacher may point out that fact fluency is an issue with a math student. The teacher

could then offer resources that parents can use to reinforce fact fluency. This type of dialogue is

essential to student success.

Traditional grading systems are often weighted heavily toward summative assessments.

While summative assessments are certainly a part of a strong instructional design, they only

capture one moment in time. Wormeli (2011) suggested that educators should allow a student

multiple opportunities to show what they know rather than focus on a single summative

assessment. Standards-based reporting seems to be a natural extension of this idea. A standards-based report card demonstrates student growth over time rather than student success with a single assessment. While traditional report cards could be adjusted to accomplish the same goal, a standards-based approach may be more conducive to the change.

Effects on Learning

Students learn best when their basic needs are met. One basic need is for students to feel safe. By focusing more on student progress rather than a summative assessment, it is possible that students will feel more safe in the classroom. Results of a study by Miller (2013) indicated that students felt less pressure under a standards-based reporting system as progress was being noted rather than performance on a single assessment. This study seems to reinforce the idea that standards-based reporting may have a positive effect on overall learning.

Students perform better when what they are learning about is meaningful to them. Another effect on student learning under a standards-based system is that students receive more information regarding their areas of strength and areas of improvement. Research seems to indicate that by providing this type of meaningful feedback, students generally report that they have a greater connection to the lesson content (O'Connor & Wormeli, 2011). It is possible that students are intrinsically motivated to a greater extent under a standards-based system than they are under a traditional grading system because they can connect with the material at a deeper level.

Under a standards-based reporting system, teachers can list the standards in their rooms and refer to them throughout a lesson. Some teachers use the visual standard as a means of showing class progress by checking off the standards as it is reached by all or the majority of the classroom. In addition, teachers can list individual students and have them check off the

standard as they reach it on an individual basis. Research from Heflebower, Hoegh and Warrick

(2014) indicated that this type of accurate and timely reporting can improve student achievement.

Standards-based reporting systems may better allow students to assess themselves when

compared to a traditional reporting system. Shepard (2000) has conducted research that indicates

that student achievement increases when students are given the opportunity to regularly assess

themselves. By giving students the opportunity to assess themselves on a given standard, it is

likely that students will have more ownership regarding their success (McMillan & Hearn,

2008). A standards-based reporting system may be more conducive to student self-assessment

when compared to a traditional reporting system. This is because a standards-based system

allows for greater detail regarding specific learning goals whereas a traditional system focuses

more on overall results.

The body of research indicates that students feel less pressure under a standards-based

report card along with an increased sense of self-motivation. Standards-based reporting also

allows teachers to provide quicker feedback to their students who can self-assess easier than

when compared to a traditional system. While there are certainly dissenting opinions with regard

to moving from a traditional system to a standards-based system, the reasons for the change seem

to be reinforced by the current body of literature.

Correlation to Overall Achievement

The body of research has yielded mixed results when determining whether a standards-

based reporting system results in higher student achievement. In one study by Fink (2015)

quantitative and qualitative achievement data was collected from 63 high school students. Two

teachers participated in the study, one of who graded using a standardized approach and one who

did not. Students had a lower class grade average in the standards-based classroom, yet scored

higher on assessments that were directly related to the mastery of Common Core State Standards

(CCSS). The researcher in this study concluded that the classroom grade average was lower

because the teacher did not include homework or extra-credit in the score the students earned.

Also, this study had so few participants that broad-based conclusions should not be drawn.

Other research found little to no correlation between overall grades and standards-based

reporting. For example, Brookhart et al. (2016) wrote that only a minimal increase in scores was

reported after standards-based grading was implemented. It is possible that a lack of teacher

training was an issue, researchers concluded. Other studies produced the opposite result with

student achievement being directly related to a standards-based approach to grade reporting.

With these mixed results, further research is warranted.

It is possible that students who experience a standards-based reporting system achieve

higher simply because their teachers are more focused on standards. While this would seem

obvious, it calls into question whether a standards-based system actually increases student

performance or if a teacher who is more focused on standards produces better results.

Regardless, the evidence for a change in student and teacher mindset is overwhelming, which in

and of itself may be reason enough to explore a standards-based system.

Correlation to Standardized Testing Achievement

While the connections of standards-based report cards and overall student achievement

are inconsistent, the research on the correlation to standardized test results is much more

thorough and consistent. Several studies have been completed that show a direct relationship

between high standardized test scores and students who were exposed to standard-based

reporting. While most educators would agree that high standardized test scores are not the main

goal of an educational entity, it is important to note this correlation and to study the accompanying research.

A study by Rainey (2016) was designed to determine if there was a correlation between achievement on the State of Texas Assessment of Academic Readiness (STAAR) exam and standards-based report card grades. Third graders at a school near the Dallas-Fort Worth, Texas area were the subjects of the study. Rainey's results were based on two years of data sets. A comparison was made between the student's standardized report card scores and their scores on the STAAR exam. A strong correlation was shown to exist.

Similar results were found from a study that took place in Colorado (Haptonstall, 2010). Five school districts were examined with four using traditional grading practices and one using standard-based report cards. Each schools' scores on the Colorado Student Assessment Program (CSAP) were compared to their report card scores. The school that used a standards-based report card had a greater correlation to students' report card scores and their scores on the CSAP. While this does not indicate higher achievement, it does demonstrate that a correlation exists between standards-based report card grades and scores on standardized tests.

Sieling (2013) connected academic achievement on standardized tests with standards-based report cards as well. Results from the Minnesota Comprehensive Assessment (MCA) math exams were reviewed for 149 students over a 2-year period. Students scored higher on the exam when they were exposed to standards-based grading throughout the year. In addition, Sieling discovered that the students who were exposed to standard-based grading reported feeling a greater level of satisfaction with their performance when compared to students who were exposed to only traditional grading.

There are examples of research determining little to no correlation existing between standards-based report cards and student achievement. One such example is a study by Greene (2015) in which the researcher found results that were not consistent with standards-based grading determining student performance. The research compared student scores on the Missouri Assessment Program's (MAP) tests for students who were exposed to standards-based grading and those who were not. The sample size of the study included 200 students from four different school districts. Greene did not find a correlation between student performance and exposure to standards-based reporting systems.

There may be reasons behind why some research demonstrates a connection between standard-based report cards and achievement on standardized tests while other research does not. Sample size is an important factor to consider and in most cases where there was not a correlation, the sample size was relatively small. Also, it is possible that the participants from a particular study were not as prepared as those from other studies. For example, Olson (2005) found that there was no increase in achievement after a school introduced standards-based grading. Olson (2005) wrote that the lack of correlation could be attributed to the fact that the teachers in the study were not fully trained on the standards-based reporting system. Factors like this are hard to quantify, but it is important to note that the body of literature does not fully align with one position or another.

Relationship to Mastery Learning

Standards-based grading has similarities to several long-standing educational theories including Mastery Learning. Based on the theories of both John Carroll (1963) and Benjamin Bloom (1968), Mastery Learning includes a core belief that given the proper amount of time and instruction, people can learn anything. Traditional letter grading systems seem to represent a

different philosophy. Under traditional letter grading systems, students are given a fixed amount

of time (6-Weeks, 9-Weeks, a semester, etc.) to learn a set number of objectives. After the fixed

amount of time has expired, teachers move on to the next set of objectives, even if students did

not meet the previous set of objectives. Standards-based grading usually works with fewer

standards than traditional grading. Students can work on mastering fewer standards rather than

working to master many objectives. This allows standards-based grading to align more closely

with other theories that have yielded positive results such as differentiated instruction.

Effect on Culture

The purpose behind any new school initiative should be to support student growth and

achievement. There is a great movement for classrooms to be responsive to student need. For

this to take place, the culture of the building, district and community must be aligned. By

adopting a standards-based approach to reporting grades, it is possible that classroom may

become more responsive to student needs, thereby creating a culture that is student-centered.

Research indicates that one of the biggest factors at play in the culture of a school is for students

to have the opportunity to control their own learning (McCombs & Miller, 2007). By allowing

students to track their own mastery of standards, it is possible that they may have more

opportunities to influence their own learning.

There is research that indicates students report a greater feeling of happiness when they

can self-assess regularly (Shepard, 2000). A standards-based approach to reporting allows for

student to be able to assess themselves on a regular basis. Teachers can communicate the

standards to students using a document outlining the standards. As students progress, they can

check off the standards they are secure with. By allowing students to track their own process,

the culture of a classroom will likely change. Both teachers and students will be standards-focused which may increase student achievement.

Student motivation is key to any cultural shift. If students are unmotivated, teachers will find it difficult to implement a student-centered responsive classroom. By focusing first on motivation, culture changes more easily. Research indicates that students are more motivated to learn when there are opportunities for mastery (Miller, 2013).   A standards-based approach to grade reporting motivates students to succeed through progressive mastery rather than passing or failing. As mentioned earlier, students may be happier under a standards-based system because they have more opportunities to demonstrate growth as well as mastery. This may lead to a cultural shift within a classroom.

When students are fearful of failure, they become anxious. Research indicates that students will avoid difficult learning tasks when they believe they may fail (Zimmerman & Schunk, 1989). When students are graded on a single assessment rather than their progress overtime, they may feel that their worth is determined by one single test. This may be counterproductive to the overall goal of student achievement.

Guskey (2011) believes that leaders should support meaningful learning experiences for students that create a greater self-perception. Standards-based reporting allows teachers to provide multiple paths to demonstrate proficiency. Each path could be tailored to meet individual student needs. Under a standards-based system, the goal is not to have every student pass a summative assessment. Rather, the goal is for every student to grow and to eventually demonstrate mastery of each standard. This paradigm shift may be particularly effective with students who are naturally anxious or those who have a poor perception of self.

Matthews (2012) wrote that students are more likely to achieve when they understand their own strengths and weaknesses. Traditional letter grades give students the ability to understand which subjects are difficult for them, but little information is provided as to the specific deficiencies a student is experiencing. Standards-based report cards allow students to understand the specific areas within which they excel and the areas that need more work. By understanding their own strengths and weaknesses, students will likely feel more confident that they are able to achieve. It is likely that this sense of confidence will positively influence classroom culture.

Building and Community Culture

By focusing on standards, it is possible that there will be a cultural shift within an individual school building. Teachers can start each lesson with an objective that is standards-based and then work to achieve the goal. Students are better able to articulate standards when the language is being used throughout the building (Iamarino, 2014). By having a common language, administrators, teachers and students can all work to achieve the same goals.

With a common language in place that is based in standards, a sense of community can be achieved within a building. Leaders often speak of organizational culture and how important it is to success. Every culture has a common language. When a school adopts a common language that is standards-based, it is likely that a stronger sense of culture can be achieved. If administrators, teachers and students all agree on the common goal of achieving standards, it is likely that a positive culture will develop.

Just as with building and classroom culture, it is important that community stakeholders understand the goal of a school or a district. When switching to a standards-based system, administrators and teachers must clearly articulate the reasons behind the change to parents and

the community at large. The message must be clear and consistent so that stakeholders have at least a rudimentary understanding of what a standards-based system is and how their students will be assessed.

Parents will likely have questions about a shift to a standards-based system, so it is important that districts have evening meetings that allow stakeholders to ask questions. The goal should be to create a common language, just as it is at the building level. If parents can clearly articulate what is expected of their students, it is likely that they will be able to assist them with their instruction.

Conclusion

Grading reform efforts have been taking place in the United States for many years. It is clear that the traditional letter grading system is something that parents and other stakeholders recognize and are familiar with. While a standards-based grading system is more aligned to original systems from early education, traditional letter grading has become the norm. This fact alone makes a switch to a standards-based system a challenge for any district. Still, many states have adopted a standards-based approach to grading and teaching (Guskey, 2004).

The research is clear that standards-based reporting systems change how teachers teach and possibly how students learn (Guskey & Bailey, 2010). When teachers focus on standards, they tend to change their instruction to meet standards. While this seems obvious, it is important that educators recognize this fact because it will be instrumental to any decision to switch from a traditional letter grading system to a standards-based reporting system. If standards are truly what educators want students to know or be able to do, it is logical that our instruction and grading reporting should be standards-based.

There is research that indicates that parents are better informed under a standards-based reporting system (Guskey, 2001). Traditional systems do not provide as much information about student growth and mastery when compared to standards-based systems. Still, there are challenges that districts face when the move to a standards-based system. Parents may misinterpret a standards-based report card as they are less familiar with the system (Cizek, 2000). Also, parents have embraced traditional reporting systems. When a switch is made, it is possible that parents will want to assign a letter grade to every standard that is listed. District leaders must fully educate stakeholders before the change is made if it is to be successfully implemented.

There are other obstacles to a standards-based reporting system. For example, it can be difficult for stakeholders to agree upon what should be included within a standards-based report card (Guskey, 2011). Also, parents and teachers may oppose the switch believing that a letter grade better sorts students on a bell-curve (Guskey, 2011). Teachers may not want to abandon letter grades as they use them as punishment (McMillian, 2001). Finally, many stakeholders may believe that letter grading forces students to try harder (Guskey, 2011). Strategies to overcome these obstacles should be studied further as the body of research is lacking.

Research indicates that educators should limit the number of standards that are reported so that parents do not feel overwhelmed (Guskey & Bailey, 2001). This is another area of research that needs to be explored further. While it is understood that fewer standards would be less information for parents to process, there is little research into how stakeholders should decide on the standards that are to be reported. Also, many states offer little guidance in this area. While most states have anchors or eligible content, the sheer number of objectives is overwhelming for non-educators.

The logistics of the actual implementation process of adopting a standards-based report card need further research. An excellent example exists through the work in Kentucky with Guskey and Bailey (2001), but there is little information regarding best practices for implementation on the local level. Further research could examine many schools who have adopted standards-based report cards along with quantifiable results. Recommendations could then be made as to what works and what does not work during the implementation process. This information would be valuable to educators who are trying to decide whether they should implement a standards-based report card.

Professional development is instrumental to the process of implementing a standards-based report card. The review of literature indicates that there needs to be further research in this area. It is not clear as to what specific professional development is required to produce positive results. While the body of research seems to agree that professional development is a core part of the implementation process, educators are left to determine what professional development content should be used.

While the body of literature agrees that standards-based grading provides meaningful feedback to parents (Brookhart, 2011), there is little information regarding strategies to create parent buy-in. Researchers agree that things like class rank and overall reasoning should be explained (Guskey & Jung, 2012), but there is little information regarding the parent buy-in process. Further research could examine what works and what does not work in this area.

Student benefits from a standards-based report card have been researched extensively. Administrators need to agree upon their reason to adopt a standards-based report card if indeed the decision is made. The body of literature indicates that students feel less pressure under a standards-based system (Guskey, 2013; Roderick & Camburn, 1999). Also, students seem to

benefit from the multiple opportunities to demonstrate proficiency under a standards-based

system (Wormeli, 2011). However, when trying to determine whether a standards-based

reporting system actually contributes to overall student achievement, the results are mixed.

There is a much stronger correlation to standardized testing achievement than there is to overall

achievement. This may be because schools who adopt a standards-based report card are much

more focused on standards than those who do not. While this stands to reason, there is an

opportunity for further research into whether results can be attributed to a standards-based report

card or standards-based instruction.

There is a strong correlation between standards-based report cards and student-centered

classrooms. Students indicate that they feel more control of their learning under a standards-

based system (Guskey, 2011). Research indicates that students are more likely to achieve under

a system that allows them to understand their own strengths and weaknesses (Matthews, 2012).

Also, students want the ability to demonstrate mastery over time rather than on one single

assessment (Miller, 2013). The research is clear that students enjoy these types of benefits under

a standards-based reporting system.

An important area that administrators tend to focus on is organizational culture. While

there is a lot of research into culture and how important it is to organizational success, the body

of research regarding the impact of standards-based report cards and culture is lacking. It is

apparent that by focusing on standards, students can articulate what is being expected of them

more easily (Iamarino, 2014), but there is little research into how this common language actually

influences culture.

There is an opportunity for a qualitative study into how a standards-based report card

may or may not lead to positive organizational culture within a building or a district. Research

could examine building culture prior to the implementation of a standards-based report card and after the implementation. Qualitative results could be quantified, and recommendations could be given. This information may be useful to administrators who are contemplating making a change from a traditional letter grading system to a standards-based system. If research indicates a strong correlation between a positive culture and a standards-based system, it is likely that more administrators would be willing to undertake the extensive process of implementation.

The research in this capstone project will add to the body of literature as users' perceptions will be analyzed from a post-adoption perspective. The schools that will be examined have adopted standards-based report cards and have had several years to adjust. By looking at schools that are a few years into the process, it is likely that results will be more valid. Challenges will be analyzed, and suggestions will be made that are based on many years of implementation. The body of research will be furthered by offering more evidence for or against the academic benefits students experience under a standards-based system. As mentioned above, the body of literature contains mixed results when trying to answer this question. It is hoped that this research will be used by others to further the work that many have already accomplished. By examining the topic further and in a slightly different way, educators will have more research upon which to base their decisions.

CHAPTER III

Methodology

Purpose

The purpose of this study is to ultimately inform a decision whether the South Butler County School District should implement standards-based report cards. In order to make this determination, several research questions must be answered. As mentioned in the reflection section of this project, there is a push to teach to standards. While it is easy to understand the importance of teaching to standards, it is not clear as to whether standards-based report cards should be adopted by districts.

As was evidenced within the literature review, many states have adopted standards-based report cards for at least the elementary level (Guskey, 2004). This is likely because the research is fairly clear that standards-based reporting systems seem to change how teachers teach (Guskey & Bailey, 2010). When teachers know that students will be evaluated based on standards rather than traditional letter grades, it is natural to begin to teach to standards.

The research also indicates that the logistics of the implementation of a standards-based reporting system have not been fully explored. While Guskey and Bailey (2001) have provided a template for implementation, there is little research into what does and does not work well. In order to fully understand what best practices are, this study will attempt to inform users as to what obstacles are in place and how they are best navigated. Before the South Butler School District can make a decision to adopt standards-based report card, the logistics of the implementation process must be understood and a plan must be developed to eliminate problems.

Once the questions of logistics are answered, it must be determined whether students experience academic benefits because of standards-based report cards. The review of the

literature indicated mixed results in this area. While Miller (2013) found non-academic benefits

of standards-based report cards such as students feeling less pressure or stress, the academic

benefits are less clear. Fink (2015) found that classrooms that used standards-based reporting

produced students who achieved higher than a control group. However, the study used a small

sample size. Other research from Brookhart et al. (2016) found little to no correlation between

academic achievement and standards-based report cards. It will be important to know whether

local districts who have adopted standards-based report cards have realized an increase in

academic achievement. Also, it will be important to determine whether any increase was

actually attributable to the adoption of standards-based report cards.

     Finally, the South Butler County School district must understand whether standards-

based report cards better inform users as to a student's detailed achievement. Even if logistical

challenges can be overcome and students do experience an academic benefit from the adoption

of standards-based report cards, parents must be able to understand the system. It must be

determined that a user is actually better-informed by a standards-based report card when

compared to a traditional letter system.

     With all of the above in mind, the following research questions have been designed:

1. What challenges are faced by schools that implement standards-based report cards?

2. Do students experience academic benefits when standards-based report cards are
    adopted?

3. Does a standards-based report card better inform users perceptions as to a student's
    progress with regard to specific standards when compared to a traditional report card?

These questions are aligned to the purpose of this research as each must be answered before the South Butler County School District can make an informed decision regarding the adoption of standards-based report cards. Once the first question has been answered, the district leaders will know what the challenges are that they will face. As mentioned earlier, a plan can then be developed to overcome any obstacles that are in place. Before moving forward, this plan should be in place.

The second question addresses the actual benefits students may enjoy under a standards-based system. South Butler Primary School has a core belief to make every decision based on what is best for students. If standards-based report cards are what is best for students, then the district should adopt them. Once the data has been collected, it may be determined that there is no benefit for students under a standards-based system when compared to a traditional system. If this is the case, there is no reason for the district to move forward with an adoption of standards-based report cards.

The third question primarily focuses on the end-user experience under a standards-based report card. It must be understood that a report card is meant to inform the user as to a student's progress toward meeting goals. Under a traditional system, letter grades are used to express progress. With a standards-based report card, users must be able to understand the progress a student is making with regard to specific standards. Ideally, the end user is able to help a child based on the information received from the report card. The third research question will attempt to determine whether or not end users are truly better informed under a standards-based report card or a traditional system.

In order to answer the above listed research questions, a survey has been designed that will be delivered to district leaders throughout western Pennsylvania. The results of the survey

will be analyzed and quantified. The survey also includes some qualitative responses that will be coded and quantified. Once a large enough sample size is obtained the data will be analyzed with the goal of answering the research questions. After the research questions have been answered, they will be presented to the South Butler County School District. Finally, the district can use this information to compete the purpose of this study; to determine whether the district should adopt standards-based report cards.

While other similar studies exist, the purpose of this study is specific to the South Butler County School District. It may be determined the Western Pennsylvania is unique when compared to other parts of the country where other studies have taken place. Pennsylvania has developed its own set of core standards. These standards may or may not offer challenges or benefits that are unique to the state. In addition, the South Butler County School District is a unique entity. No such study has ever taken place specifically for the South Butler County School District. This action research is needed in order the district to make a decision that is not only correct, but unique to its' individual situation and needs.

Setting and Participants

This study is specific to the South Butler Primary School which is located within the South Butler County School District. Located in the southern portion of Butler County, Pennsylvania, the South Butler County School District is made up of four townships; Penn Township, Jefferson Township, Clinton Township and Winfield Township. In addition, residents of Saxonburg Borough attend the South Butler County School District. The current enrollment is approximately 2300 students. The South Butler County School District is rural and encompasses approximately 100 square miles. The district is 30 miles north of Pittsburgh, Pennsylvania. Residents have a median household income of $42,500.

The curriculum at the South Butler County School District includes courses in English Language Arts, various levels of Math, Science, and Social Studies. Students also have the opportunity to explore Music, Art, Physical Education, Technology Education and Industrial Arts. The district has adopted the Pennsylvania Core Standards and provides courses of instruction that meet the objectives that have been identified by the state of Pennsylvania.

Individual Building Data

The South Butler County School District is comprised of four schools on one campus. Knoch High School has a student enrollment of 799 in grades 9, 10, 11 and 12. Approximately 25.9% of students attending Knoch High School are economically disadvantaged. The school has approximately 11.3% of students identified as Special Education. In 2019, 78.9% of students were proficient or advanced on the Keystone Exams in the category of Literature. In the same year, 68.8% of students scored proficient or advanced in the category of Algebra. For comparison purposes, the state of Pennsylvania reported an average or 62.1% of students proficient or advanced in Literature and 45.2% of student scoring proficient or advanced in Algebra in comparable grade levels.

Knoch Middle School has an enrollment of 507 students in grades 6, 7 and 8. With a special education population of 10.9% and an economically disadvantaged population of 24.3%, the building is physically connected to the Knoch High School.   Scores from the 2019 Pennsylvania State System of Assessment (PSSA) include 69.5% proficient or advanced on the English Language Arts assessment and 37.7% proficient or advanced on the Mathematics assessment. This is in comparison to a Pennsylvania state average of 62.1% proficient or advanced in English Language Arts and 45.2% proficient or advanced in Mathematics for grades 6, 7 and 8.

South Butler Intermediate School houses students in grade 4 and 5. The building enrollment is 335 students. The building has an economically disadvantaged population of 27.5%. In 2019, 13.1% of the students in the Intermediate school were identified for Special Education support. The most recent PSSA data (2019) shows that 65.1% of students scored proficient or advanced on the English Language Arts assessment while 53.6% scored proficient or advanced on the Mathematics test. This is in comparison to a statewide average of 62.1% in English Language Arts and 45.2% in Mathematics for the same grade levels. The Intermediate school is a stand-alone building on the campus of the South Butler County School District.

The South Butler Primary School educates 592 students in grades Kindergarten, 1, 2 and 3. Students receiving Special Education services encompass 9.1% of the entire population and 30.7% are identified as Economically Disadvantaged. In 2019, the percentage of students who scored proficient or advanced on the PSSA stood at 75.3% in English Language Arts and 68.4% in Mathematics. In comparison the state average for this grade level stood at 62.1% for English Language Arts and 45.2% for Mathematics.

Additional District-Wide Data

The South Butler County School has approximately 175 teachers. Currently each building uses a traditional letter grade report card with the exception of the Primary School Kindergarten where a progress narrative is used that is loosely standards-based. Student in 1st-3rd grade receive a traditional letter grade report card. The average teacher in the South Butler County School District has 10.6 years of experience.

The leadership team at the South Butler County School District includes a Superintendent who has been with the district for approximately 3 years. After eliminating the position of Assistant Superintendent, a Director of Human Resources position was created in 2019.

Additional central office personnel include a Business Manager and a Director of Special

Services. Each building has a full-time principal and the Middle School and High School both

employ an assistant principal in each building.

Study Participants

The participants for the data collection portion of this research are principals and school

leaders in Western Pennsylvania. First, the formal Institutional Review Board (IRB) process was

completed. Next, a survey was sent to all principals on an email list that was held by the Mid-

Western Intermediate Unit 4 in Grove City, Pennsylvania. The initial email contained standard

IRB approved language that informed participants of any potentially negative impacts of the

study. The location that would house data was included along with options for potential

participants to opt out. While the focus of the study was on those who already have been

through the standards-based report card adoption process, the survey was open to all principals

as it also was created to answers qualitative questions regarding sentiment toward standards-

based report cards.

The initial call for responses was limited. A second call was put out through the Butler

County Education Council. This second call created a greater response than the initial email.

The researcher then sent emails directly to schools that already had standards-based report cards

in place. These direct emails created a response and an appropriate amount of data was able to

be collected.

To triangulate data, direct emails were sent to district leaders that already had standards-

based report cards in place. This email included all of the information that the original call for

responses contained. In addition, the researcher took the time to personalize the message to each

individual. This created a greater response than the first and second attempts to gather data. The

information gathered was rich and detailed.

Additional triangulation will occur through a review of publicly available standardized

testing data. These include Pennsylvania State System of Assessment (PSSA) data from the

Future Ready PA website (www.fut017readypa.org). This website allows users to view math and

reading PSSA results for schools throughout the commonwealth of Pennsylvania. This data will

be analyzed in concert with data from the research survey to ensure results are accurate. Also,

the survey tool will have more than one question that correlates to each individual research

question. This will provide for further triangulation.

This research will attempt to answer the research questions so that the South Butler

School District can make an informed decision with regard to standards-based report cards. The

specific building that will be used for the initial decision is the South Butler Primary School. As

mentioned earlier, this school houses students in grades Kindergarten, 1st, 2nd and 3rd. While the

Kindergarten already uses a simplified standards-based report card, the other grades currently do

not.

There have been internal conversations regarding standards-based report cards during

administrative meetings. A concern was raised that students at the Primary School (grades k-3)

were receiving failing grades on their report cards. Some members of the administrative team

are fundamentally opposed to the letter grade F being included on any student's report card at the

Primary school. While this philosophical debate has many aspects, it did launch a discussion

regarding standards-based report cards. As this discussion deepened, it was determined that the

district would explore the idea of standards-based report cards for the Primary School. The other

schools within the district currently are not considering standards-based report cards, but the information from this study will be helpful to them as well.

It will be important to present the data findings to the school board and community members in a way that is simple to understand. Educational jargon should be avoided so that the data can be received in a way that does not confuse the end user. A clear recommendation will be given by the researcher who is also the principal at South Butler Primary School. This recommendation needs to be free of any bias that may skew the results. Safeguards have been put in place through a collaboration with the doctoral committee members. Specifically, the principal at South Butler Intermediate is not only a committee member, but also a trusted colleague who will help to ensure that any research bias is not in play during the results, findings and recommendation portions of this project.

Research Plan

According to Hendricks (2017) an action research plan should be based on a review of literature and should account for credibility, transferability, dependability, and confirmability. The description of the research plan should be detailed enough that a colleague could implement the plan (Hendricks, 2017). This action research is simplistic in that it seeks to answer three research questions:

1. What challenges are faced by schools that implement standards-based report cards?

2. Do students experience academic benefits when standards-based report cards are adopted?

3. Does a standards-based report card better inform users perceptions as to a student's progress with regard to specific standards when compared to a traditional report card?

Each of the three research questions will be answered by examining data collected the

relate to individual queries. As mentioned earlier, this will be accomplished by examining

responses to survey questions and by analyzing qualitative data from open ended responses. In

each case, credibility, transferability, dependability, and confirmability will be addressed.

Literature Based

This research into standards-based report card is grounded in the literature review that

was presented earlier. For example, we know that communication is a paramount issue when it

comes to progress reporting (Guskey, 2001). It is important to know whether a standards-based

report card communicates results in a way that is easy to understand by end users including

parents. This relates directly to the third research question.

Krumboltz and Yeh (1996) wrote about how standard letter grades can lead to a spirit of

competition. Guskey (2011) argued that standards-based report cards could possibly lesson this

competition and create a greater focus on individual achievement. However, we know there will

be some stakeholders who fundamentally oppose any change because of traditional letter grades

being what they are most familiar with. The first research question attempts to provide educators

with the tools needed to overcome these barriers to implementation.

The research review also indicated that studies have produced varying results when trying

to determine whether students achieve higher academic levels under a standards-based report

card (Clymer and William, 2007). The second research question is designed to provide more

data. More importantly, this data will be specific to Western Pennsylvania where no such study

has been found by the researcher.

It is essential that this research plan be grounded in literature. As mentioned above, each

research question was designed after a careful literature review. By accounting for difficult to

answer questions, this research may be useful to those who are considering adopting standards-based report cards. Specifically, those in Western Pennsylvania may benefit the most from this research as all of the participants for this study are located in that part of the country.

Fiscal Implications

With any study, fiscal implications of a switch to standards-based report cards must be studied. With rising costs throughout Pennsylvania, districts are becoming more fiscally aware than ever before. The South Butler County School District works to make decisions based on what is best for students. If a switch to a standards-based report card is truly what is best for students, the district will want to make that change. However, there are not unlimited funds. It will be important to have financial details ahead of time so that a budget can be crafted that allows for the change, while remaining fiscally conservative.

The survey is designed to answer the question of fiscal needs. Participants are asked to describe the fiscal implications of the switch. An overall dollar amount for the switch is listed and participants are asked if there were any unforeseen costs involved. By asking these important questions, the South Butler County School District will be better equipped to make a decision. If the costs are too high, either other budget items must be cut or revenue somehow increased. These are difficult details that must be accounted for before a recommendation can be made.

Possible fiscal needs for a conversion to a standards-based report card are somewhat predictable. There will certainly be a software conversion cost from the South Butler County School District's Student Information System provider known as Skyward. In addition, staff would need to be trained so there would be a cost for professional development. Finally, parents and other stakeholders would need to be educated so that they understand standards-based report

cards. This may mean that evening informational meetings would be held which would result in labor costs to the district.

There may be unforeseen costs involved with a switch to standards-based report cards as well. These unforeseen costs need to be built into the budget for the conversion project if the South Butler County School District intends to adopt standards-based report cards. It is hoped that the information from this study will help the district to accurately predict both the foreseen costs as well as the unforeseen and incidental costs of a conversion to standards-based report cards.

Every district has unique fiscal limitations. While districts with many resources may have less difficulty adopting standards-based report cards, even districts with limited resources can consider the adoption process. This research will provide a baseline as to what the fiscal needs may be for a successful adoption. While the unforeseen costs may be unique to each district, the data from this study may assist districts in making an informed and student-centered decision.

Methods of Data Collection

Multiple methods of data collection were employed including multiple choice surveys, open ended text responses, analyzation of Pennsylvania State System of Assessment results, Pennsylvania Future Ready Index results as well as triangulation with previous similar studies. The primary data collection tool was a survey that was created by the researcher. Each survey question was designed to address a specific research questions. Multiple questions relating to the same research question were used in an attempt to triangulate data.

The survey used for this research project began with the following statement:

Dear Colleague

My name is Greg Mandalas and I am a doctoral candidate at California University of Pennsylvania. I am writing to invite you to participate in a research study that I am completing as part of my degree requirements. If you choose to participate, you will be asked to complete a survey that should take approximately 30 minutes of your time. This survey will be used to learn more about the challenges and benefits of standards-based report cards. Here are some important things to know about this study:

- The data from this study will be used to complete an action research paper that explains the challenges and benefits of standards-based report cards.
- The primary researcher is Greg Mandalas (724-991-2458 or man3431@calu.edu)
- The faculty advisor for this research is Dr. Peter Aiken (717-368-8745 or aiken@calu.edu)
- Your participation in this study is voluntary.
- You may discontinue your participation at any time without penalty. All data will be discarded if you discontinue your participation.
- Results of this survey are confidential.
- Results of this survey are anonymous.
- Minimal risks are anticipated for participants.
- Returning the survey is an indication of your consent to use the data.
- If you have questions about the project, please contact Greg Mandalas at 724-991-2458 or man3431@calu.edu.
- Results from this study will be housed at a secure location on the campus of California University of Pennsylvania.
- This study is approved by the California University of Pennsylvania Institutional Review Board. This approval is effective 08/12/2019 and expires 08/11/2020.

Thank you for your consideration. If you choose to participate, please click the link below.

https://docs.google.com/forms/d/e/1FAIpQLSf5SM0UFLjMK7gp4S9PJ3VwaSTCN_EV8NWb1do6x-X_GhY4IA/viewform?usp=sf_link

Sincerely,
Greg Mandalas

The survey then continued with the following questions:

1. What is your role?

   Principal k-6

   Assistant Principal k-6

   Principal 7-12

   Assistant Principal 7-12

   Other

2. Does your school use standards-based report cards?

   Yes

   No-If not, skip to question 19

3. When did you school adopt standards-based report cards?

   1-2 years ago

   3-5 years ago

   5-7 years ago

   10 or more years ago

   I don't know

4. What was the most successful part of your implementation of standards-based report

   cards?

   Professional Development was well done

   Parent buy-in was established

   Staff buy-in was established

   Other

5. What was the greatest challenge you faced during the implementation process?

Professional development

Parent buy-in

Staff buy-in

Other

6. When compared to previous years, did your students perform better on standardized tests

before or after your implementation of standards-based report cards?

Before

After

I don't know

7. If your students performed better after implementing standards-based report cards, do you

attribute their success to standards-based report cards?

Yes

No

N/A

8. Do you believe your teachers support standards-based report cards?

Yes

No

9. Do you support standards-based report cards?

Yes

No

10. Do your families support standards-based report cards?

Yes

No

11. Do you educate your families with regard to standards-based report cards?

Yes, with face-to-face meetings

Yes, through print or online information

No

12. Do you feel better informed by a standards-based report card or by a traditional report

card?

Standards-based

Traditional

13. Have your PSSA reading scores improved under a standards-based report card?

Yes

No

14. If you answered yes to question 13, do you contribute the increase in achievement to

standards-based report cards?

Yes

No

N/A

15. Have your PSSA math scores improved under a standards-based report card?

Yes

No

16. If you answered yes to question 15, do you attribute the increase in achievement to

standards-based report cards?

Yes

No

N/A

17. What were the financial ramifications of switching to a standards-based report card?

Vendor charges

Staff Training

Other

None

18. If there were financial ramifications for switching to a standards-based report card, what

was the approximate dollar cost?

Under $1000

$1000-$5000

$5000 or more

N/A

19. Does a standards-based report card better inform users perceptions as to a student's

progress with regard to specific standards when compared to a traditional report card?

Open ended response

20. What challenges are faced by schools that implement standards-based report cards?

Open ended response

21. Do students experience academic benefits when standards-based report cards are

adopted?

Open ended response

Validity

Research needs to be conducted in a way that is valid so that others might be able to use

the result to meet student needs. When considering the ways to make this research valid,

Credibility, Transferability, Dependability, and Confirmability were all important to the

researcher. If the research is not credible, others cannot benefit from the results. When research

lacks the ability to be transferable, it is limited in its value. Research that is not dependable

cannot be relied upon to make decisions. Finally, research that is no confirmable will be view

with guarded scrutiny by others in the field.

Credibility

Hendricks (2017) defines credibility as the overall plausibility of the research findings.

The findings must be rooted in data. Even still, if the results of the findings are unorthodox and

counter to other research, the issue of credibility must be examined in even greater detail. The

research questions for this study are based in the overall worthiness of standards-based report

cards. By surveying those who have already implemented standards-based report cards, it is

likely that results will be more credible when compared to data based only in theory. For this

research, the data is from those who have actually experienced standards-based report cards and

understand both the positive and negative attributes.

Transferability

Hendricks (2017) also recommends that action research studies be transferable meaning

that studies should be applicable to other contexts. This research is based in standards-based

report cards but it does have implications for other contexts as well. For example, those who are considering using standards-based teaching may benefit from this research as they will understand how students' progress may be best reported under a standards-based system. Also, the results of this study will be directly applicable to other individuals who are considering standards-based report cards. This information would have been helpful to the research when the initial question of standards-based report cards was raised during an administrative meeting. Perhaps in the future other individuals will be able to study this research to make a decision rather than having to do their own research.

Dependability

For an action research study to be dependable, others should be able to replicate similar results with similar participants (Hendricks, 2017). This research is dependable as the results will be based on responses from those who currently use standards-based report cards. It can be understood that similar results would occur with similar participants as the research is unbiased in nature. The Reponses elicited will be from the participants themselves with no further manipulation from the researcher. This important not only for the dependability of the study, but also for the credibility. By remaining unbiased, the research should answer the research questions in a way that most benefits students. The ultimate goal is to make a decision based on what is best for student. Dependability is important to this goal.

Confirmability

In addition to being credible, transferable, and dependable, action research studies should also be confirmable (Hendricks, 2017). Conformability is achieved when the results of a study are unbiased. As mentioned above, this research into standards-based report cards is free of bias as the results are from those who have actually experienced the standards-based report card

implementation process. The researcher has no agenda other than to answer the research

questions. This is important as others may look to this research in order to make decisions about

implementing standards-based report cards. If there is any hint of bias within the results, the

entire research could be viewed as being unconfirmable.

Conclusion

The methodology used for this research is fairly simple and easily replicated by other

researchers. By focusing on the clear purpose of making a recommendation for or against

standards-based report cards for a specific school, it is likely that the answers to the research

questions will impact real change. It is likely that other schools are trying to answer similar

questions, which makes this research important to the overall educational field. While the focus

is on participants in Western Pennsylvania, educators in other areas can extrapolate the results of

this study in order to answer similar questions within their own context.

The actual research plan is based in a simple survey that could easily be replicated by

other researchers. While some questions are specific to Pennsylvania, other researchers could

modify the questions to better suit their own context. Fiscal implications are included as this will

be an important factor for almost any school district. Multiple forms of data are collected

through not only the survey, but other data that is available to the public. All of the standardized

testing results can be found on various Pennsylvania specific websites. Other states likely have

similar data warehousing software that is accessible to the public.

Finally, validity is addressed in a way that is meaningful and authentic. This research

may be used by other educational leaders to make important curriculum decisions. By ensuring

that validity is accounted for, the research becomes more useful to other researchers. It is hoped

that other school leaders will use this data to make decisions based on what is best for students in

their own area.

COVID-19 Update

During this portion of the research project, the world experienced the COVID-19 pandemic. Schools were closed and nearly every portion of life was impacted in some way. This change to reality led to some changes in the research. While initially a recommendation was to be made for or against standards-based report cards by the summer of 2020, it became apparent that the South Butler County School District would be focused on working through the school closure. While the research continued, the actual recommendation would not be given until the pandemic ended.

CHAPTER IV

Data Analysis and Results

Introduction

Within this chapter results of the study will be shared. As the research study used many sources of data, the results from all sources will be reviewed. An explanation regarding the triangulation of data will be elaborated upon regarding specific data points. Each research question will be reviewed along with data specific to particular questions. Finally, a discussion will be included that provides additional insight into the results along with an interpretation of the findings.

Results

This research project was created as an attempt to answer three questions.

1. What challenges are faced by schools that implement standards-based report cards?

2. Do students experience academic benefits when standards-based report cards are adopted?

3. Does a standards-based report card better inform users perceptions as to a student's progress with regard to specific standards when compared to a traditional report card?

While data was mixed in some areas, in others clear conclusions can be drawn. Each research question was answered using more than one source of data. For example, the questionnaire that was used contained several questions that related to challenges faced by schools when they implement standards-based report cards. Further triangulation took place during personal interviews conducted by the researcher. Below, each research question will be addressed along with the data used to answer the question. Charts and graphs will be included that further explain the results.

Research Question 1-Challenges and Successes

The first research question was designed to learn more about the challenges that schools face when standards-based report cards are implemented. Several questions on the questionnaire were related to this question. At the same time, it is important to understand areas that districts were successful so that other districts might replicate their results. Challenges can be both fiscal and logistical. With this in mind, the questionnaire was designed to garnish practical information that could readily be used by school districts.

When respondents were asked about the successes they enjoyed during their implementation of standards-based report cards, 75% indicated that staff buy-in was well established (figure 1). This would support much of the literature reviewed earlier (Guskey, 2011). The remaining 25% of respondents indicated the parent buy-in was essential. This would seem to indicate that stakeholder buy-in is one of the greatest challenges that can be faced by districts implementing a standards-based report card. This data was further triangulated during follow-up interviews with respondents. During those interviews, staff and parent buy-in was mentioned to be a key indicator of success for each respondent.

Figure 1

What Was the Most Successful Part of Your Implementation?
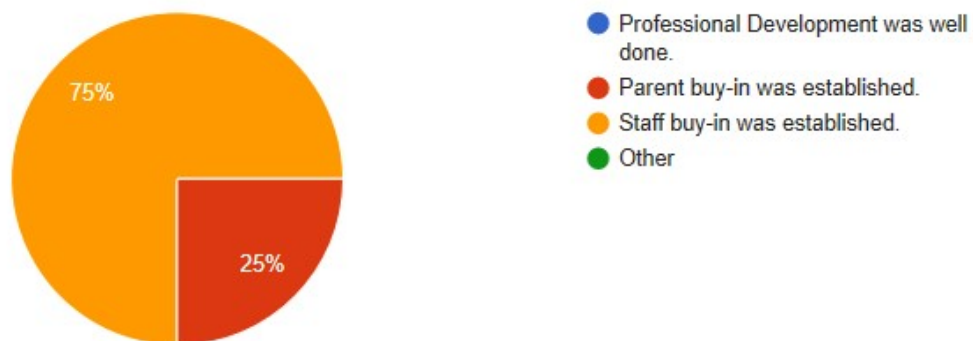
When respondents were asked about the greatest challenge they faced during the implementation of standards-based report cards, the results indicated that while some respondents listed professional development and staff buy-in as issues, most respondents choose *other*. This led the researcher to explore the open-ended comments for this particular question. Upon reviewing this information, it was noted that respondents wrote about what they considered to be a lack of understanding of the expectations for each standard. Other respondents wrote that there needed to be a culture shift regarding the entire notion of grades. This relates directly to Guskey (2011) and the need for community and staff education and professional development. With this information, it can be assumed that staff development is paramount to the success of an implementation.

Respondents were also asked if teachers support standards-based report cards. This question had very few responses, but 100% of the participants indicated that teachers do support standards-based report cards. This may be because most respondents have had standards-based report cards in place for many years. It can be concluded that the initial change to a standards-based report card can be difficult, but many teachers come to support the change after it is made.

Another question related to the support of standards-based report cards was directed at the administrator themselves. When responding to this question, there was an overwhelming support of standards-based report cards as well. Again, this may relate directly to the fact that most respondents have had standards-based report cards in place for many years. This information was further reinforced when respondents were asked about parental support for standards-based report cards. Again, 100% of the respondents indicated that families do support standard-based report cards.

Participants in the research study were asked if they educate families with regard to standard-based report cards. While the participation rate for this question was fairly low, zero respondents indicated that they did not educate their families. Instead, 66% of respondents indicated that they used face-to-face meetings to educate their families while the remaining participants used print or online information (Figure 2).

Figure 2

How Districts Educate Their Families Regarding Standards-Based Report Cards

Legend:
- Yes, with face-to-face meetings.
- Yes, throught print or online information.
- No.

33.3%
66.7%
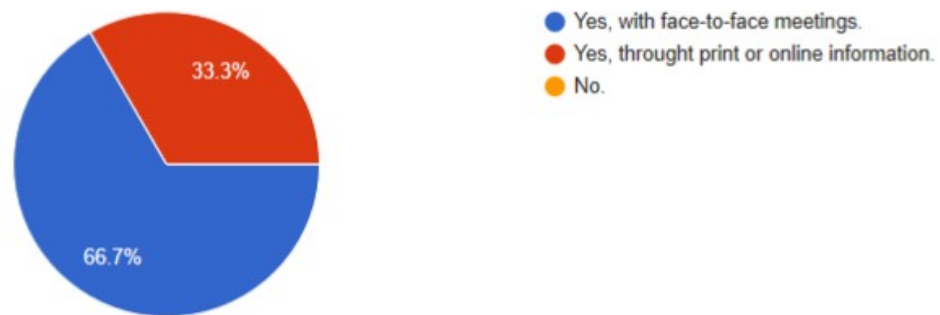
Participants were asked about the financial ramifications of a switch to a standards-based report card. During interviews, respondents reported that were charges for vendors realigning student information systems to reflect the change. There were also charges for staff training as many districts allowed their teachers to observe other teachers who had already switched to a standards-based system. The main cost was for substitute teachers. When asked specifically about the costs, 100% of respondents reported a cost of less than $1000.

One participant reported on some unseen financial ramifications of making the switch to a standards-based report card. The respondent wrote that the biggest challenge for his particular district was the time it took to train staff and to work with vendors to make the necessary technological changes.

The respondent wrote:

"Time to make changes to the format of report cards in the computer programs or software used for grading (was the greatest challenge). Also, time to train staff in using a standards-based report card (was) substantial."

While the respondent did not list a dollar amount, it is important to note that this unseen financial ramification would likely push the total cost for a change to a standards-based report card well over the reported $1000 mark.

The answer to the first research question seems to align well with the literature study presented earlier. For example, Marzano (2007) pointed out the parent buy-in is essential to the success of the implementation to a standards-based report card. This work was backed up by Guskey and Bailey (2010) when they wrote that professional development and parent education are key components. The challenges of a standards-based switch are clear. However, there are research-based ways to overcome these challenges.

Research Question 2-Academic Benefits

The second research question was designed to learn more about the academic benefits students receive when a standards-based report card is in use. Questions on the questionnaire were directly related to this question. While it is easy to quantify student achievement results prior to and post a standards-based implementation, it is important to remember that increases or decreases in scores may or may not be directly related to standards-based report cards.
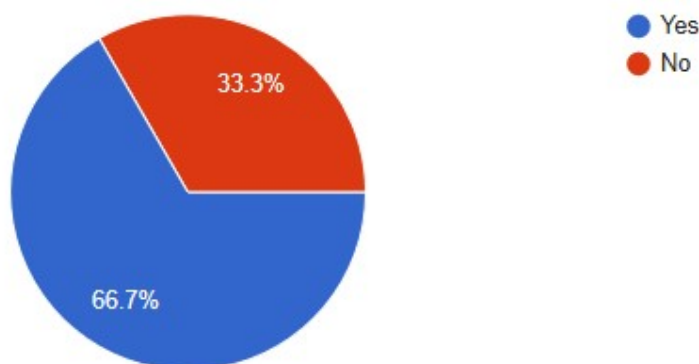
When participants were asked whether their students performed better on standardized tests before or after the implementation of standards-based report cards, every respondent indicated that they did not know. This may be because the implementation took place many

years in the past. As mentioned during the literature review, answers to this type of question are

often mixed.

This was true when participants were later asked whether their Pennsylvania State

System of Assessment (PSSA) reading scores improved under a standards-based report card.   A

total of 66% of respondents indicated that their scores did improve (Figure 3). This seemed to be

in direct conflict with respondents' earlier answers.

Figure 3

Have Your PSSA Reading Scores Improved Under a Standards-Based Report Card?

When participants answered the follow-up question that asked whether they contributed

the increase in achievement to standards-based report cards, 100% of respondents indicated that

standards-based report cards were not related to their success. This data was triangulated during

additional interviews conducted by the researcher. Respondents indicated that while standards-

based report cards are important, they are not the key to student success. This would align well

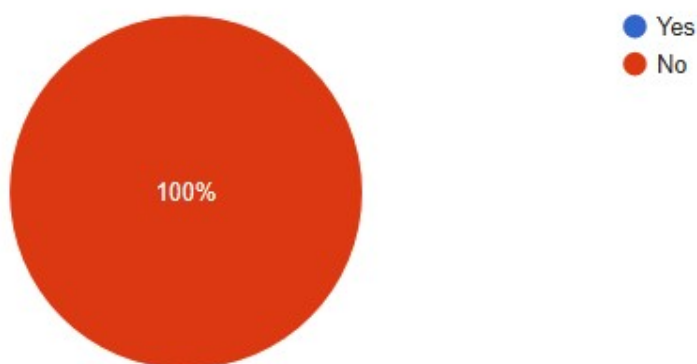with the literature review presented earlier in this project.

A similar question was later asked on the questionnaire but rather than focusing on

reading scores, the question asked about math performance. Specifically, the question asked

respondents if their PSSA math scores improved under a standards-based report card.

Surprisingly, 100% of respondents indicated that their students' math scores did not improve

under a standards-based report card (Figure 4). The total number of respondents for this question

were less than the total number for the question regarding reading. This may have skewed the

scores somewhat.

Figure 4

Have Your PSSA Math Scores Improved Under a Standards-Based Report Card

The responses to the questions that were asked regarding a correlation between student

achievement and the use of standards-based report cards align well with the literature that was

reviewed earlier. Results are often mixed in this area. For example, recall that Clymer and

William (2007) studied a group of eighth-grade students who experienced a shift from traditional

grading to standards-based grading within their science courses. While research results indicated

that students who were exposed to the standards-based system reported having a greater focus on

the mastery of material when compared to those who had not, this did not necessarily lead to

higher achievement scores.

The Fink (2015) study mentioned earlier is another example. In this study, quantitative

and qualitative achievement data was collected from 63 high school students. Students in this

study had a lower class grade average in the standards-based classroom, yet scored higher on

assessments that were directly related to the mastery of Common Core State Standards (CCSS).

Greene (2015) also found little to no correlation between standards-based report cards and

student achievement.

Other researchers have found a very strong correlation between standards-based report

cards and student achievement. As mentioned in the literature review section of this report,

Rainey (2016) demonstrated that a strong correlation existed between high standardized test

scores and standards-based report cards. This research was similar to a research that took place

in Colorado (Haptonstall, 2010). In this study, schools that used a standards-based report card

had a greater correlation to students' report card scores and their scores on the Colorado state

achievement tests.   Other researches like Sieling (2013) produced similar results in other states

like Minnesota.

These mixed results were further triangulated through open ended questions on the

questionnaire as well as anecdotal evidence garnished through interviews. For example, when

asked the research question directly, one participant responded that he did not believe there was a

correlation between academic achievement and standards-based report cards. The participant

believed that the real benefit was that a switch to a standards-based report card forced staff

members to lay out goals and to create action plans for meeting goals. This was in contrast to

another respondent who believed that a very strong correlation existed between standards-based

report cards and academic achievement. His comments are below:

> When zeroes, participation points, extra-credit, and a number of other
>
> assessment practices (i.e. completion points) lend to a grade that may or may not
>
> accurately reflect the learning, the standards-based report cards point directly to

the curricular outcomes we have articulated for our respective courses and grade

levels and speak to exactly where a student stands on the continuum of learning

versus an average of multiple points of assessment that may be skewed,

influenced, and manipulated by behavioral measures and/or singular assessments

that skew grades both positively or negatively (Quote from participant).

Research Question 3

Research question number 3 was designed to lead to an understanding of how standards-

based report cards inform the user when compared to traditional report cards. Specifically, the

question was: *Does a standards-based report card better inform users perceptions as to a*

student's progress with regard to specific standards when compared to a traditional report

card? In order to answer this question, the questionnaire included several opportunities for the

participants to express their thoughts on the experience of various users. These questions

focused on parents, teachers and administrators as it is possible for each user group to have

dissimilar experiences.

The first question from the questionnaire asked participants if they believe teachers

support standards-based report cards. While this question was used earlier in this report with

regard to challenges and opportunities with the implementations process, it certainly can be used

to determine how teachers experience standards-based report cards. When responding to this

question, all participants who currently have standards-based report cards, indicated that their

teachers do support standards-based report cards. From this response, it seems that teachers feel

that standards-based report cards better inform them with regard to specific standards when

compared to a traditional report card.

The second question from the questionnaire asked the respondents, who were all principals or administrators, if they support standards-based report cards. Again, for those who already had standards-based report cards in place, every respondent indicated that they do support standards-based report cards. As with the earlier question, it can be concluded that administrators feel that standards-based report cards do better inform them with regard to specific standards when compared to traditional report cards.

The next question asked participants about how parents view standards-based report cards. Specifically, the question asked if families support standards-based report cards. As with the other questions reviewed earlier, all respondents were administrators who already had standards-based report cards in place. Every respondent indicated that families do support standards-based report cards. This further reinforces the concept that standards-based report cards do better inform users when compared to traditional report cards.

A later question asked if school districts educated their families with regard to interpreting a standards-based report card. Again, the respondents were all administrators who already had standards-based report cards in place. Each respondent said that they do educate their families through either face-to-face meeting or through online information. This aligns well with the fact that respondents indicated that their families prefer standards-based report cards over traditional report cards. Without educating their families, the results would likely be much different.

Finally, respondents were asked if they feel better informed by a standards-based report card of by a traditional report card. Again, each respondent already had standards-based report cards in place. In alignment with earlier responses, every respondent indicated that they feel better informed by a standards-based report card when compared to a traditional report card.

This is not surprising as each of these respondents had already adopted and were used to reading

a standards-based report card.

The open-ended response portion of the survey was open to all respondents including

those who have not adopted a standards-based report card. This section produced differing

results when compared to earlier sections that were only answered by those who had already

adopted standards-based report cards. When asked directly the third research question as

written, the respondents seemed to interject some opinion rather than fact. As a reminder, the

third research question asked if a standards-based report card better informs users perceptions as

to a students' progress with regard to specific standards when compared to a traditional report

card.

One respondent wrote that he does not believe a standards-based report card better

informs users when compared to a traditional report card. He mentioned that the language used

by within current standards would be hard for outside stakeholders to understand as his

reasoning. However, as the data indicates, with a strong parent/family education program in

place, end users prefer standards-based report cards.

Another respondent wrote that parents might be confused by standards-based report

cards. In addition, the respondent felt that with most school having an online report card, parents

are able to check on a student's progress at any time. This respondent seems to be referring to

checking a student's overall status with regard to letter grades rather than their progress with

individual standards.

Other responses were more aligned with earlier responses. For example, one respondent

wrote that standards-based report cards are more geared toward mastery of specific concepts

while a traditional report card seeks to only assign an ambiguous grade. Several other

respondents simply wrote that they do believe standards-based report cards better inform users.

When quantifying the overall responses to this question, the results were supportive of

standards-based report cards (Figure 5).

Figure 5-Does of Standards Based Report Card Better Inform Compared to a Traditional

Report Card?
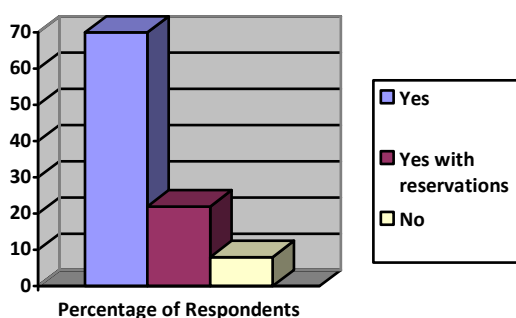
Data was triangulated through personal interviews with specific respondents and from

those who did not participate in the initial survey. During these interviews, the question of

parent and family education was brought up several times. For example, when those who do not

have standards-based report cards in place were asked about why they have not made the

decision to implement them, the fear of parents not understanding terminology came up. While

the evidence is clear that once parents are educated on the topic, standards-based report cards are

effective, it seems that many districts are still cautious.

Discussion

Data from each research question was analyzed and triangulated with data from the

questionnaire along with anecdotal data from interviews. Further, state standardized testing

information was used to attempt to align data from the questionnaire and interviews. This

triangulation process ensures that results are valid and credible. Each research question was

answered through this research project in a way that aligns well with the literature review presented earlier.

The first research question was designed to learn more about the challenges and the areas of opportunities for districts who are considering implementing standards-based report cards. The literature review focused heavily on a few key topics that seem to align well with research results. First, administrators must fully understand their own reasoning for changing to standards-based report cards. Once they themselves have bought into the process, teachers must be fully educated on the topic. After teachers are educated, families and the community at large must understand the reasoning behind the change. This buy-in process is supported heavily by the data gathered within this research project.

The fiscal challenges of implementing a standards-based report card are minimal. The literature review within this research project indicated that even districts with few financial resources are able to implement the new design. When participants were asked specifically about the fiscal restraints, they listed things like an expense for substitute teachers during the professional development process. This along with costs related to the technical design of the report card are all manageable for most districts.

Research question two focused on academic achievement when standards-based report cards are implemented. The review of the literature was mixed on this topic. While some research seems to indicate a correlation between an increase in standardized test scores and the use of standards-based report cards, other research seems to contradict. The research conducted within this study produced similar results. While some respondents indicated that there were minor gains seen after the implementation of standards-based report cards, most respondents indicated that there was no correlation.

When this was further triangulated with data from the state department of education, no correlation could be seen. From this, it can be concluded that while teachers may teach differently when a standards-based report card is in place, there is no correlation between the report card itself and improved standardized test scores. However, there is evidence that teachers do change their teaching so that it is more focused on standards when a standards-based report card is being used.

It could be argued that the fact that teachers are more focused on standards is reason enough to switch to a standards-based report card. However, the actual research question for this project was designed to understand if there is a correlation between academic achievement on standardized test and the use of standards-based report cards. The answer appears to be that there is little to no correlation between the two.

The final research question focused on whether a standards-based report card better informed users as to a student's progress with regard to individual standards when compared to a traditional report card. The literature review presented earlier supported the fact the end users are better informed by a standards-based report card. However, it is essential that end users are educated on the topic of standards in general and standards-based report cards specifically so that they can fully appreciate and understand the information a standards-based report card provides.

The research presented in this project aligns well with the literature review and the body of research. Many participants wrote that they do educate their families and parents with regard to a standards-based report card. Some do this through face-to-face meetings while others rely on printed text or technology. Which ever method is chosen, this seems to be an essential part of any successful implementation.

This data was triangulated through individual interviews with participants who had already implemented standards-based report cards. Again, participants were quick to point out the fact that they view education as key. This was further triangulated when interviewing those who had not already adopted standards-based report cards. Many participants wrote that they felt standards-based report cards would not be easily understood by parents and families. This was a common reason as to why participants had not implemented standards-based report cards. The body of evidence here indicates that with some training, parents and families can understand standards-based report cards and that they are indeed better informed by them when compared to traditional report cards.

Summary

With the research questions being fully answered by this research along with the body of literature, it is possible to focus specifically on the South Butler County School district at large and the Primary School specifically. It is clear that the first step of the process is to create buy-in. This first has to begin with the administration and the school board. After that is accomplished, buy-in must be created with the staff. Finally, parents must buy-in to the change as well.

It is also clear that standards-based report cards cannot specifically be linked to student achievement. However, data indicates that teachers and students are more standards-focused when a standards-based report card is in use. This fact alone is important and fits well with the goals of the Primary School at the South Butler County School District. It is important that the focus does not turn to heavily to improved standardized test scores as this is not fully supported by the data.

Finally, this research has shown that end users are indeed better informed with regard to a student's progress with a specific standard when compared to a traditional report card. However, this is only true when the end user is well educated on the topic of standards and standards-based report cards. At the Primary School, this is something that would have to take place on a yearly basis as new Kindergarten students are arriving every year. A follow-up training would be important annually for students and parents who are returning as they may not fully understand the process.

Everything mentioned in this summary is possible to be accomplished at the Primary School. It is important to lay out a sequenced order of events so that a recommendation can be made. Also, it is important to consider the fiscal implementations of the change, but as mentioned earlier, these are minimal. With the data presented in this project, a recommendation can be made that is fully supported by research.

CHAPTER V

Conclusions & Reflective Planning/Applications

Introduction

The research presented throughout this document has been focused on guiding a

recommendation for the South Butler County School District and the Primary School in

particular. In this chapter, conclusions will be outlined and triangulated with data from other

sources. An application for the Primary School at South Butler School District will be provided

and implications will be expressed in tangible terms. A more in-depth study of the specific

financial ramifications will be discussed along with facts and figures regarding the actual budget

at the Primary School.

The final portion of this chapter will focus on future directions for the Primary School

along with possibilities for future research. New research questions will be identified that will be

valuable for the second year of implementation. Unforeseen impacts will be addressed along

with a reflection as to what has been learned throughout the project. Finally, a concluding

statement will be provided along with some final thoughts.

Conclusions

This research project was designed with the ultimate goal of informing a decision

regarding the implementation of standards-based report cards at the South Butler School District

and the Primary School specifically. The researcher is the principal at the Primary School and

has been charged with recommending a decision. Data collected throughout the research project

are strong enough to inform this decision.

With regard to the first research question, it is obvious that there are challenges to

implementing a standards-based report card. Data indicates that the buy-in process is essential

and must be sequential. First, administrators and school boards must buy-in, followed by

teachers and the community. The research was clear that this process sets the foundation for the

overall success or failure of the implementation process.

There are also technical challenges that must be addressed. The student information

system within any school that is considering making the change to standards-based report cards

must be configured to allow for the change. The technical requirements for this change will vary

depending on the system being used, but this must be addressed before moving forward. After

all, there is no sense making a recommendation for a change that is not possible due to technical

restraints.

Parents must be educated as to how to read and interpret a standards-based report card.

The earlier literature review indicated that this is paramount to the success of an implementation.

Research conducted throughout this project has reinforced that parent education is important to

the success of the implementation process. In fact, many respondents wrote that parent

education needs to be a priority for any district considering making the change to standards-

based report cards.

The second research question focused on whether students experience academic benefits

when a standards-based report card is in use. The literature on this topic has been mixed. Some

studies have found that there is an academic benefit for students when a standards-based report

card is used and other studies have shown that there is no correlation. The research within this

study was mixed as well. While some districts reported minor gains, an examination of actual

standardized scores from the state of Pennsylvania could not support this claim.

It will be important to base the decision to implement a standards-based report card on

reasons that do not include academic benefits. With the research being mixed on the subject,

buy-in could be in jeopardy if administrators taught academic benefits as being the primary

reason for the switch to a standards-based report card.   Instead, administrators should focus on

the switch being important so that a greater focus can be made on standards rather than on

improving test scores.

The third research question focused on whether standards-based report cards better

inform users with regard to a students' progress with a specific standard when compared to a

traditional report card. An initial review of literature indicated that a standards-based report card

does indeed better inform users, but this comes with some caveats. The key here is that users

must be educated with regard to the reading and interpretation of standards-based report cards.

This fact was backed up by the research contained within this document through both the

questionnaire as well as individual surveys.

A successful implementation at the Primary School will include a formal education

process for all users including parents. This needs to be mapped out in a way that takes into

account individual schedules and needs. A strong technical version of the training will be

important as not everyone will be able to attend face-to-face meetings. There will be fiscal

implications for this training which will be outlined later in this chapter.

Applications at South Butler Primary School

The South Butler Primary School serves students in grades kindergarten through third.

The total student population fluctuates from 550 to 600 students in any given year. The annual

budget for general supplies in the building is approximately $45,000 per year. There is a mix of

teachers with experience and those that are fairly new with the average length of tenure being 12

years. Due to Covid-19, the district is currently experiencing a shortfall for the upcoming

budget. The school uses a math series that is 7 years old and a reading series that is 2 years old. Finally, the current student information system is Skyward.

The first step in adopting a standards-based report card for the South Butler Primary School is for the administration to be educated on the topic. The primary researcher in this research project is the principal at the South Butler Primary School. It will be the principal's responsibility to work with his superintendent to develop an understanding of what a standards-based report card can do for the Primary School. The superintendent at the South Butler County School District is already supportive of the change to a standards-based report card at the Primary School.

School board members must be fully informed if a change to a standards-based report card is being considered. Each year, a curriculum committee comprised of school board members meets in February to discuss any curricular changes at the South Butler County School District. School board members should be made aware that the administration is exploring a possible adoption during the summer of 2020. This will give an adequate amount of time for board members to become fully acquainted with standards-based report cards before they are actually adopted in February of 2021.

This research has demonstrated that teachers are key players when it comes to a successful implementation of standards-based report cards. During the summer of 2020, the principal at the South Butler Primary School will work with a small group of teachers to begin the exploration process. These teachers will be the grade level facilitators at South Butler Primary School. The principal will present the research from this document to the teachers so that they are able to develop an understanding of standards-based report cards. Once buy-in has been created with this group, a strong foundation will have been laid for the next steps.

After working with grade-level facilitators, it will be important to introduce the topic of standards-based report cards to the entire teaching staff at South Butler Primary School. The principal will use the summer of 2020 to design a professional development plan that addresses the teachers at South Butler Primary School. This plan will involve staff meetings leading up to the start of the school year where the information from this research will be presented. Volunteers for an adoption committee will be accepted and a plan for a visit to another school district will be started. It is important that teachers are able to speak with other teachers who already use standards-based report cards so that their questions can be answered by someone with experience.

The South Butler Primary School has a very strong Parent Teacher Organization (PTO). Members of the PTO are key players at the school and are very involved. The principal at South Butler Primary School will work with the PTO so that they understand standards-based report cards. A plan will be developed that includes parent information nights so that parents are fully educated on the topic. In addition, Social Media will be utilized to disperse information. The main Social Media to be used will be the PTO's Facebook page which has nearly 800 members and several followers.

The technology department at the South Butler County School District will be instrumental in actually making the change to a standards-based report card. Currently, the district uses the Skyward student information system. This system allows for a transition to standards-based report cards, but the particular format provided may or may not meet the needs of the South Butler Primary School. As the 2020-21 school year develops, a recommended report card format will be created. It will be important for the technology team to work with

teachers so that the format created is actually possible from a technical standpoint. It would be futile to create a report card that technology could not support.

When discussing a standards-based report card with the staff and parents at South Butler Primary School, it will be important that the principal explains the research behind the academic benefits of the implementation. As mentioned earlier in this research, studies have produced mixed results with regard to a correlation between standards-based report cards and improved academic achievement. While the goal of any school is to improve academic achievement, an adoption of a standards-based report card may or may not contribute to improve scores. However, the research is clear that when teachers and students use standards-based report cards, there is a paradigm shift in the teaching and learning process. Teachers are more focused on standards and individual goals and students are less worried about letter grades and are more concerned with mastery of specific goals. This is the reason to shift to a standards-based report card. Academic achievement may or may not be a byproduct of the change.

The third research question in this project focused on whether standards-based report cards better inform users with regard to a student's progress with individual standards when compared to a traditional report card. This research question was supported affirmatively throughout this project. However, end users are only better informed if they are fully educated on how to read and understand a standards-based report card.

As mentioned earlier, the South Butler Primary School administration will educate end users with regard to standards-based report cards. However, this may not be enough. The principal at South Butler Primary School will need to be able to address concerns parents have regarding the end of letter grades. They will likely ask questions about what grades translate to what standards scores. For example, if a student is secure with a particular standard, does that

translate to an A? The answer is that letter grades are no longer being used, but this will be very

hard for many parents to understand.

In order to counter parent concerns, it will be important for the South Butler Primary

School staff to create a Frequently Asked Questions document that answers many of the

concerns parents will likely have. As staff members are working with parents, they will need to

refer to the Frequently Asked Questions document so that all parents are receiving the same

message. Once a staff member answers a question in a way that is not approved or supported by

the district, parents will become very confused. For example, if a staff member answers the

earlier question about secure relating to an A in a way that leads a parent to believe that letter

grades are still in place, much of the foundational work that had been done earlier will likely be

ineffective.

The implementation process for any change as large as a switch to a standards-based

report card can be a daunting task for staff and administration. Many examples of failed

attempts have been discovered during this research. With a clear plan laid out, it is more likely

that the South Butler Primary School will enjoy a successful implementation that is research

focused.

Fiscal Implications

It is important to consider the fiscal implications of a switch to a standards-based report

card at South Butler Primary School. As mentioned earlier, the overall budget for the Primary

school general supplies in 2020-21 is approximately $45,000. In this section, costs for

technology, professional development and unseen costs will all be examined. It is important to

consider fiscal implications for South Butler Primary School and for the South Butler County

School District overall. These numbers will certainly be important to both school board members and the community at large.

The first costs to consider are the technical costs for making a switch from a traditional report card to a standards-based report card. As mentioned earlier, the South Butler Primary School uses Skyward as their student information system. While Skyward has a standards-based report card option, this is not the option that the district currently uses. Whenever there is a technical change to be made, vendors often charge a fee for making such changes. This will be the case if the South Butler Primary School makes the change to a standards-based report card.

When examining the actual cost for the technical change at the Primary school, it has been determined that the vendor will charge approximately $1000 to make the change from a traditional report card to a standards-based report card. Figure 6 represents this change in a pie graph for expressed as an overall comparison to the general supplies budget at the Primary School.

Figure 6-Technical Cost
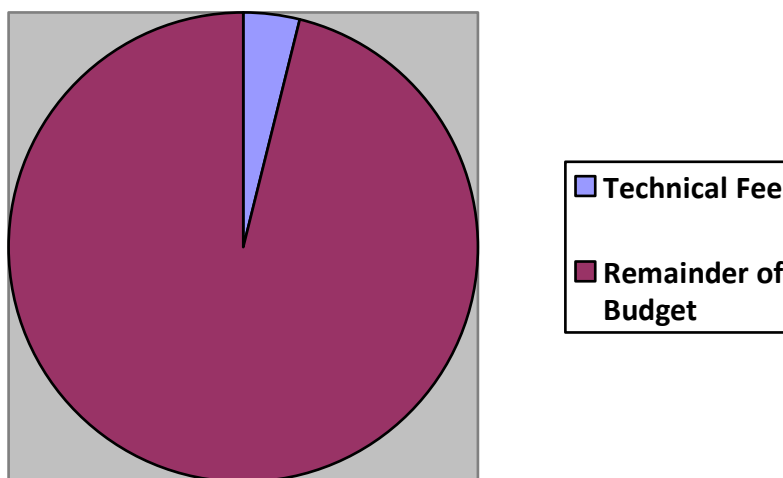
As demonstrated in the chart (Figure 6), the technical fee for making a change to a standards-based report card is 2% of the total budget for general supplies at the South Butler Primary School.

Another fiscal factor to consider is the costs for professional development with regard to a switch to a standards-based report card. When the team from South Butler Primary School attend other schools to learn more about their program, there will be a cost for substitute teachers. It is likely that the team from South Butler Primary School will have 5 members who are classroom teachers. Other members will be included, but they will likely be auxiliary staff who do not require substitutes. The South Butler County School District pays their subs at a rate of $100 per day. Therefore, each day of professional development will likely cost $500 in substitute teacher fees. Considering that professional development days will number 4 in total for the 2020-21 school year, the total cost will be $2000 (Figure 7).

Figure 7-Substitute Teacher Costs
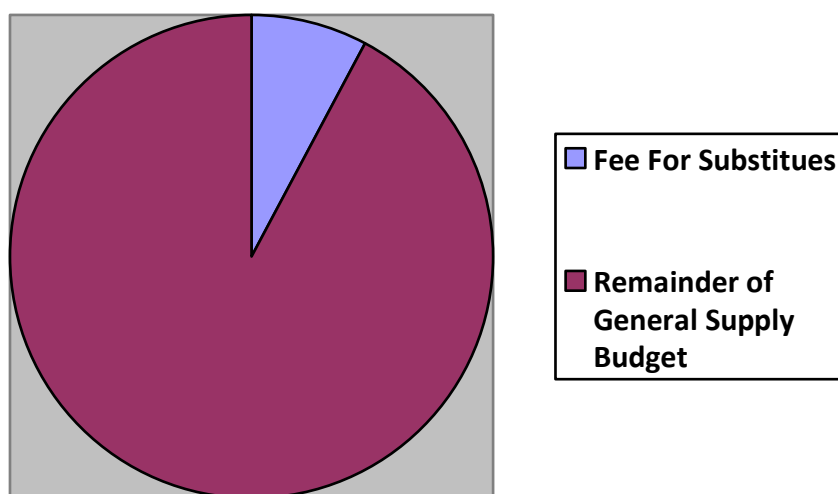
As expressed in Figure 7, the cost for substitute teachers as expressed as a part of the overall general supply budget for the South Butler Primary School is approximately 4%.

There will be unseen costs for the switch to a standards-based report card. For example, administrators and technical staff will need to put in man hours to design the details related to a switch to a standards-based report card. While these man hours are already built into the district's budget for salaries, it is important to note that these costs do exist. It is estimated that the principal at South Butler Primary School will spend approximately 20 hours on designing the implementation process. The Primary School principal is paid an annual salary rather than an hourly wage. However, the Primary Principal is expected to work 260 days per year. When considering that the average salary for a principal in a similar position is approximately $100,000 per year, the daily rate for the principal is $384 per day. If the principal works an average of 9 hours per day, his hourly rate is effectively $42 per hour. Working from these figures, the total cost in man hours for the principal to implement a standards-based report card is $854 (Figure 8). As expressed below, the total costs in manhours when compared to the principal's overall salary is less than 1%.

**Figure 8-Manhour Costs for Principal**
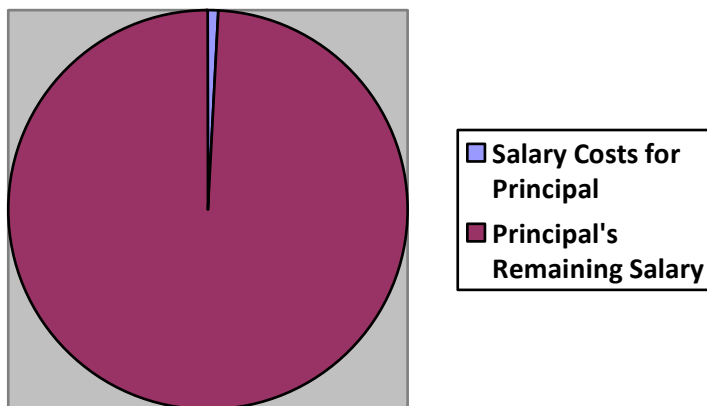
When considering the total cost for a switch from traditional report cards to standards-based report cards at the Primary School, the figure for the technical costs along with the professional development cost is $3000 (Figure 9).

Figure 9-Technical Costs and Substitute Costs
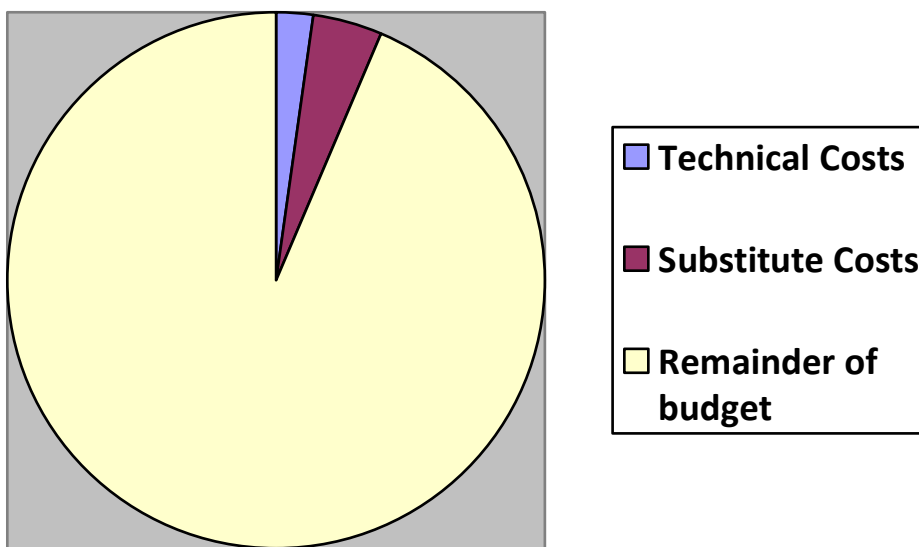
The entire budget for the South Butler County School District is greater than $35,000,000. The total cost for the switch to a standards-based report card including the manhour costs is $3854. This is expressed in Figure 10 as a portion of the entire district budget.

Figure 10-Total Cost vs District Budget
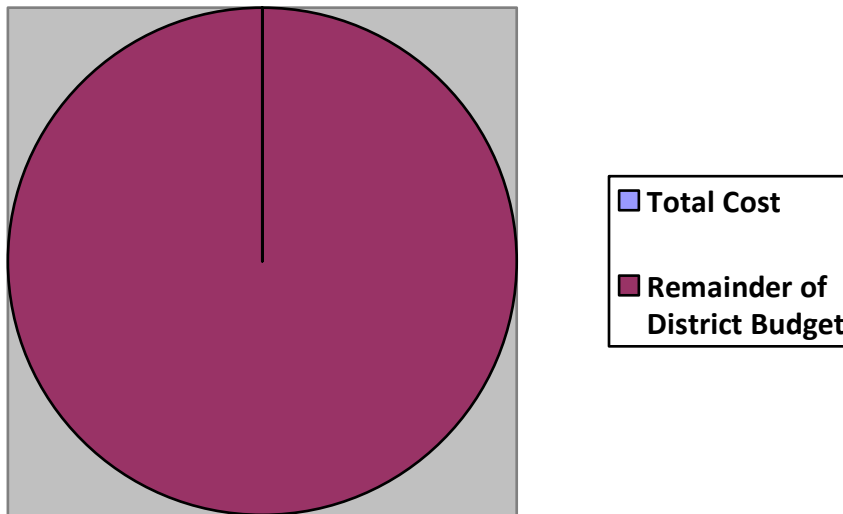
The total fiscal cost for the change from a traditional report card to a standards-based report card is minimal when compared to both the building budget and the overall district budget. While fiscal costs need to be considered, there is nothing that is prohibitive from a fiscal standpoint that would cause the change to fail. It will be important to make all stakeholders aware of this data so that costs are understood and managed.

Recommendations

The research presented in this documented has given the principal at South Butler Primary School enough information to make a decision about changing from a traditional report card to a standards-based report card. The literature review was informative as it demonstrated how a traditional letter grade system is antiquated. While it seems obvious that a standards-based system would better inform an end-user, it was still important to understand that research

backs up this idea. Additionally, it was important to understand where letter grades came from and why they are still used. These sorts of deep-rooted traditions are hard to break, but by having an understanding of their origin, they can be understood and overcome.

The literature review was also important in that it indicated that there are some very specific challenges that districts face when they implement a standards-based report card. Many of the challenges can be overcome through careful planning. For example, it is clear that many parents will try to associate a standards-based narrative with a letter grade. By understanding that this may occur, the principal at South Butler Primary can take steps to answer questions before they arise.

The buy-in process was something that was important throughout the literature review as well. Teacher buy-in is important, but so is parent and community buy-in. It is clear that this process needs to be logically planned out as well if an implementation is to be successful. This is an important foundational process that may define success or failure.

The actual research contained within this document aligned with much of the research that was presented during the literature review. For example, it is clear from both the research and the literature review that challenges faced by districts across the country are very similar to those face by districts in Western Pennsylvania with regard to the implementation of a standards-based report card. These challenges will most certainly be present during the implementation at South Butler Primary School. In addition, the mixed results concerning academic achievement will likely be similar to the results at South Butler Primary School. Finally, the fact that a standards-based report card better informs users as to the progress an individual student is making toward a standard will certainly hold true for South Butler Primary as well.

With all of the data taken into consideration, the principal at South Butler Primary School will be making a recommendation to adopt standards-based report cards. The research contained within this document will be paramount when describing the reasoning behind this decision. At South Butler Primary School, the principal tries to make every decision based on what is best for kids. The data indicates that a switch to a standards-based report card is indeed what is best for kids.

Future Research

When completing this research, several gaps in the literature were apparent. Many of these gaps related to specific groups of students. For example, there is very little research into standards-based report cards and traditionally underserved populations. Likewise, there is little research into standards-based report cards and their impact on students who receive learning support services. Additionally, much of the research into standards-based report cards focuses on the primary grade students. There is little research into the high school population and even less research into the post-secondary population. It would seem that adults could benefit from a standards-based reporting system just as children could. Therefore, an additional list of future research questions has been compiled.

1. What are the positive and negative impacts of a standards-based report card on traditionally underserved populations?

2. What are the positive and negative impacts of a standards-based report card on students who receive learning support services?

3. What are the challenges to implementing a standards-based report card at the High School level and how can they be overcome?

4. What are the challenges to implementing a standards-based report card at the post-secondary level and how can they be overcome?

5. Does a standards-based reporting system benefit students at the high school level?

6. Does a standards-based reporting system benefit students at the post-secondary level?

These research questions will be important to answer in the future. The first two research questions are of particular interest as the implementation at South Butler Primary School will certainly have an impact on both traditionally underserved student populations as well as those who are receiving learning support services. Therefore, during the 2021-22 school year, data will be collected with regard to both of these populations. These data will be shared with additional staff members and administrators so that adjustments can be made if warranted.

Summary

This research has answered three important questions each of which will be used to guide the implementation of standards-based report cards at South Butler Primary School. First, the research pointed out challenges along with opportunities with regard to the implementation process. By understanding each of the challenges, a plan has been developed to counteract the difficulties.

Next, it was shown that the South Butler Primary School may or may not experience academic gains on standardized test scores as the research has produced mixed results. This aligned with earlier research done by others. The important takeaway is that South Butler Primary School should adopt standards-based report cards because of the paradigm shift to a focus on standards rather than the expectation of higher standardized test scores. The benefits

students receive from the change come from the instruction that is delivered rather than higher achievement on standardized test scores.

Finally, the research clearly indicated that a standards-based report card better informs users as to a student's progress with regard to an individual standard. This fact is especially true when districts take the time to fully educate end users on what a standards-based report card is and how it can be used to meet students' needs. It will be important for South Butler Primary School to educate the staff and the community so that the implementation is successful.

The process of switching from a traditional report card to a standards-based report card is a daunting task. At South Butler Primary School, the goal is to make every decision based on what is best for kids. This research has indicated that a switch to a standards-based report card is indeed what is best for kids. While the process will be difficult, the research presented here will be invaluable to the implementation of a standards-based report card at South Butler Primary School.

References

Aidman, B.J. (2001, January). Building a better report card. *The Education Digest, 66*(5), 49-

    53.

Bloom, B. S. (1968). Learning for mastery. *Evaluation Comments, 1*, 1-14.

Bowers, A.J. (2011). What's in a grade? The multidimensional nature of what teacher-assigned

    grades assess in high school. *Educational Research and Evaluation, 17,* 141-159.

Brookhart, S. M. (2011). *Grading and learning: practices that support student achievement.*

    Bloomington, IN: Solution Tree Press.

Brookhart, S. M., Guskey, T. R., Bowers, A. J., McMillan, J. H., Smith, J. K., Smith, L. f.,

    Welsh, M. E. (2016). A century of grading research. *Review of Educational Research,*

    86(4), 803-848.

Carroll, J. B. (1963). A model of school learning. *Teachers College Record, 64,* 723-733.

Cizek, G.J. (2000). Pockets of resistance in the assessment revolution. *Educational*

    Measurement: Issues and Practice, 19(2), 16-23. Doi:10.1111/j.1745-

    3992.2000.tb00026.x

Clymer, J. B., & William, D. (2007). Improving the way we grade science. *Educational*

    Leadership, 64(4), 36-42.

Cox, K. B. (2011). Putting classroom grading on the table, a reform in progress. *American*

    Secondary Education, 40(1), 67-87.

Fink, A. M. (2015). *A comparative analysis of a standard based grading system versus a*

    traditional based grading system with respect to student academic achievement and

    motivation. (Doctoral dissertation, Concordia University-Chicago). Retrieved from

    ProQuest Dissertations and Theses database. (UMI No. 368905)

Greene, G. L. (2015). *An analysis of the comparison between classroom grades earned with a standards-based grading system and grade-level assessment scores as measured by the Missouri assessment program.* (Doctoral dissertation, Lindenwood University). Retrieved from ProQuest Dissertations and Theses database. (UMI No. 3737088)

Guskey, T.R. (2001). Helping standards make the grade. *Educational Leadership, 59*(1), 20-27.

Guskey, T. R. (2004). The communication challenge of standards based reporting. *Phi Delta Kappan, 86*(4), 326-329.

Guskey, T. R. (2006). Making high school grades meaningful. *Phi Delta Kappan, 87*(9), 670-675.

Guskey, T. R. (2011). Five obstacles to grading reform. *Educational Leadership, 69*(3), 16-21. Retrieved from http://www.ascd.org/publications/educaional-leadership/nov11/vol69/num03/abstract.aspx.

Guskey, T. R. (2013). The case against percentage grades. *Educational Leadership, 71*(1), 68-72.

Guskey, T. R. & Bailey, J. M. (2001). *Developing grading and reporting systems for student learning.* Thousand Oaks, CA: Corwin Press.

Guskey, T. R. & Bailey, J. M. (2010). *Developing standards-based report cards.* Thousand Oaks, CA: Corwin Press.

Guskey, T. R., & Jung, L. A. (2016). Why you should trust your judgment. *Educational Leadership, 73*(7), 50-54.

Hall, P. M., & McGinty, P. J. (1997). Policy as the transformation of intentions: Producing program from statute. *The Sociological Quarterly, 38,* 439-467.

Hanushek, E. A. (2004). *Some simple analytics of school quality* (Working paper 10229).

      Cambridge, MA: National Bureau of Economic Quality.

Haptonstall, K. G. (2010). *An analysis of the correlation between standards-based, non-*

      standards-based grading systems and achiement as measured by the Colorado student

      assessment program (CSAP). (Doctoral dissertation, Capella University). Retrieved

      from ProQuest Dissertations and Theses database. (UMI No. 3397087)

Hargis, C. H. (2003). *Grades and grading practices: obstacles to improving education and to*

      helping at-risk students. Springfield, IL: Charles T. Thomas Publisher.

Heflebower, T., Hoegh, J. & Warrick, P. (2014). *A school leader's guide to standards-based*

      grading. Bloomington, IN: Marzano Research Laboratory.

Hendricks, C. (2017). *Improving schools through action research. A reflective practice*

      approach. Boston, MA: Pearson.

Iamarino, D. L. (2014). The benefits of standards-based grading: A critical evaluation of modern

      grading practices. *Current Issues in Education, 17*(2), 1-12.

Krumboltz, J. D., & Yeh, C. J. (1996). Competitive grading sabotages good teaching. *Phi Delta*

      Kappan, 78(4), 324-326.

Marzano, R. J. (2007). *The art and science of teaching: A comprehensive framework for*

      effective instruction. Alexandria, VA: Association for Supervision and Curriculum

      Development.

Marzano, R. J. (2010). *Formative assessment and standards-based grading.* Alexandria, VA:

      ASCD.

Marzano, R. J. & Kendall, J.S. (1996). *A comprehensive guide to designing standards-based districts, schools, and classrooms.* Aurora, CO: Mid-Continent Regional Educational Laboratory.

Marzano, R. J., & Heflebower, T. (2011). Grades that show what students know. *Educational Leadership, 69*(3), 34-39.

Matthews, W. J. (2012). Constructivism in the classroom: Epistemology, history, and empirical evidence. *Teacher Education Quarterly, 30*(3). 51-64.

McCombs, B. L., & Miller, L. (2007). *The school leader's guide to learner-centered education.* Thousand Oaks, CA: Corwin Press.

McMillian, J. H. (2001). Secondary teachers' classroom assessment and grading practices. *Educational Measurement: Issues and Practice, 20*(1), 20-32.

McMillan, J. H. & Hearn, J. (2008). Student self-assessment: The key to stronger student motivation and higher achievement. *Educational Horizons, 87*(1), 40-49.

Miller, J. J. (2013). A better grading system: Standards-based, student-centered assessment. *English Journal, 103*(1), 111-118.

O'Connor, K. & Wormeli, R. (2011). Reporting student learning. *Educational Leadership, 69*(3), 40-44.

Olson, K. E. (2005). Standards-based report cards: Accountability at the classroom level (Doctoral dissertation). Available from ProQuest Dissertations and Thesis database. (UMI No. 3196865)

Rainey, L. S. (2016). *The effect of standards-based grading on student achievement: A correlational investigation.* (Doctoral dissertation, Dallas Baptist University). Retrieved from ProQuest Dissertations and Theses database. (UMI No. 10239976)

Roderick, M., & Camburn, E. (1999). Risk and recovery from course failure in the early years of

    high school. *American Educational Research Journal, 36,* 303-343.

    Doi:10.3102/00028312036002303

Salend, S. J. (2005). Report card models that support communication and differentiation of

    instruction. *Teaching Exceptional Children, 37*(4), 28-34/

Selby, D., & Murphy, S. (1992). Graded or degraded: Perceptions of letter-grading for

    mainstreamed learning-disabled students. *British Columbia Journal of Special*

    Education, 16(1), 92-104.

Shepard, L. (2000). The role of assessment in a learning culture. *Educational Researcher,*

    29(7), 4-14.

Sieling, C. J. (2013). *Standards-based grading in mathematics: Effects on student achievement*

    and attitude. (Master's thesis, Southwest Minnesota State University). Retrieved from

    ProQuest Dissertations and Theses database. (UMI No. 1523840)

Stiggins, R. (2005). From formative assessment to assessment for learning: A path to success in

    standards-based schools. *Phi Delta Kappan, 87*(4), 324. Gale Document Number

    A139834752.

Winger, T. (2005). Grading to communicate. *Educational Leadership, 63*(3), 61-65.

Wormeli, R. (2011). Redos and retakes done right. *Educational Leadership, 69*(3), 22-26.

Zimmerman, B. J. & Schunk, D. H. (1989). *Self-Regulated learning and academic achievement.*

    New York, NY: Springer-Verlag.