Is Standards-Based Grading an Answer to Student Motivation?

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As teachers, we are always looking to find ways to motivate our students to learn. Not just to learn so they can get a good grade, but to learn for learning’s sake, to understand new content and to grow in knowledge. The question I will attempt to answer is, “How will implementing standards-based grading affect my 8th graders’ motivation to meet assigned learning targets in science?” Throughout this review I will analyze grading and communication, teacher attitudes, what grades should mean and student motivation in an attempt to find information about my question and to guide me to an answer.

Review of the Literature

Grading and Communication

Raths, Wojtaszek-Healy, and Della-Piana (1987), through on-going research, stumbled upon a truth that remains today. That truth is: when giving out grades, most problems stem from a miscommunication between teacher and student. This study surveyed undergraduate students about grading practices. What the researchers found was that the students were more successful when certain grading practices were in place; such as detailed feedback on assignments and showing exemplar work samples and clearly communicating the rules for assigning grades. Whether miscommunication is from a lack of clear expectations or a feeling that the student views their work as competent and the teacher does not, there still lies a muddy middle ground that needs to be cleared up (Raths et al., 1987). In more recent research done by Wright (2013), it was found that students who receive clear feedback from teachers on why they obtained a poor grade are less inclined to seek further communication with the teacher about it. This confirms the importance of extensive feedback as a tool for communicating with students. Cox (2011) also found that teachers saw better results the clearer they made their expectations. Some, like Wilcox
(2011) think the message to parents and students from teachers using current grading practices shows that “compliance is the priority, and grades have little to do with learning” (p. 7).

Although, some parents still prefer letter grades because that is what they know, most parents are interested in standards-based report cards because of the level of detail they are broken into (Guskey & Jung, 2006). When investigating Standards-Based Grading (SBG), “parents have noted that standards-based grading is similar to workplace evaluations” (Shippy, Washer & Perrin, 2013, p. 16) which can make communication of grades clearer to families because they are related in a way that many working adults can understand. Atwood, Siniawski, and Carberry (2014) in their research have found that SBG “is an alternative grading system that involves and depends on directly measuring the quality of students’ proficiency on well-defined course learning outcomes” (p. 2). They follow by saying the teachers use a Standard Achievement Report to show achievement score and feedback throughout the semester so that students and parents have that important communication tool to refer to. The research findings of Carberry, Siniawski, and Dionisio (2012) support this conclusion and confirm the benefit of SBG as providing “clear, meaningful and personalized feedback for both students and educators regarding student learning” (p. 1).

**Teacher Attitudes in Adopting Grading Policies**

Change is hard, even when we know it is for the better. In teaching, maybe more so than any other field, there always seems to be the next best thing. How do we know that standards-based grading is actually an improvement? Well in truth, we don’t, but by looking at the evidence and data from several studies we start to get an idea of just what SBG entails. There are some researchers, such as Kohn (2011), who feel that “the absence of grades is a necessary condition for promoting deep thinking and a desire to engage in it” (p. 31) and that letter grades
have negative effects on students. There are many more researchers who feel, like Scriffiny (2008), Noschese (2011) and Guskey and Jung (2006), that SBG makes meaningful assignments and should replace the point based system. Scriffiny (2008) points out that teachers have a hard time explaining the differences between an A, B, C, D, or F in their current grading practices. Cox (2011) found a divide amongst teachers as they were asked to implement new grading and assessment policies. Some of the policies were more accepted than others, such as common assessments. But when asked to make all F’s count as 50%, there was some push-back.

Teacher attitudes and beliefs are hard to change, especially if they have been teaching and doing things the same for a long time. Proitz (2013) found that teachers of different subjects used different grading policies. Teachers of math, for instance, found it easier to use a point based system based solely on tests, whereas the Family and Consumer Science teachers said their final grade was open to professional judgment because some of the grade reflected performance and some attitude and effort. Cox (2011) wrote of the school he was researching in that, “the superintendent has urged all teachers to have the discussion, to talk about grades, grading, and the impact on students” (p 13). Guskey and Jung (2006) found that SBG simplified reporting for teachers and Carberry et al. (2012) shared that teachers “can easily tailor the SBG system to meet their needs and expectations as necessary” (p. 2). Scriffiny (2008) came to the conclusion that when he used SBG he understood in more depth where each student was with their learning and was able to support his students better through their journey to meet the standards.

**What Should Grades Mean, or Accomplish?**

All good teachers usually are and should be constantly trying to answer the question “What should grades mean or accomplish?” What weight should we put on grades and what do they really say about our students? Guskey and Jung (2006) feel that by using a single letter
grade, there is not enough information about what specifically was learned and can lead to misinterpretations of the grade. Carberry et al. (2012) claim that current grading systems “inherently fail to meet the conditions for sound assessment of student work and learning” (p. 1). On the other hand, using SBG would seem to allow teachers to directly measure proficiencies towards course objectives.

Tierney, Simon, and Charland (2011), found that most of the participants (teachers) claimed that their “grades indicated the degree to which students had achieved the learning expectations” and that the majority of them did not include such things as participation or students’ attitudes or even group work, which they felt did not truly represent a student’s achievement, into the grade they assigned. Noschese (2011) simplifies it nicely when he states, “students are evaluated based on whether they understand the standards” (p. 10). In standards-based grading, Clymer and Wiliam (2007) believe that students should have multiple attempts to show mastery of a standard, that learning should not be a one-shot deal (p. 3). They state that offering the correct type of feedback can support the student and help give them direction in their learning. It has also been shown that SBG can clearly state to students what they need to know and do to be successful by letting students know how they are progressing through showing them evidence (or lack) of learning in both their strong and weak areas (Noschese, 2011). In standards-based learning “the teacher commented on individual students’ work to coach the students to higher achievement. Students were encouraged to act on the feedback by providing additional evidence of mastery or by revising their work to improve” (Clymer & Wiliam, 2007, p. 4).

**Student Motivation to Improve**

Saeed and Zyngier (2012) stated that:
To be motivated means to be moved to do something…. In the classroom setting, student motivation refers to the degree to which a student puts effort into and focus on learning in order to achieve successful outcomes. (p. 253)

According to Wilcox (2011), with SBG the extensive feedback to students on how to improve leads to, “dynamic, interactive and ongoing” learning in which students want to read the feedback because they understand the “conversation is not over with the assessment” (p. 10).

When students know they have the opportunity to go back and address standards that they did not meet the first time, they have the opportunity to see the knowledge that they gain in the process. Marzano and Heflebower (2011) claim that by seeing the gain, students can be intrinsically motivated. In Clymer and Wiliam’s (2007) research in working with 8th graders, they found that most of them felt the new grading system helped them achieve better learning and even more exciting is that many students shifted from their goal being to get the highest grade to their goal being to understand the content! In the study done by Carberry et al. (2012), students’ self-efficacy, or their confidence about their ability, improved when teachers used SBG, regardless of subject matter. Scriffiny (2008) also found that students expressed increased satisfaction in having more control over their grades (by having the opportunity to re-do assessments or make revisions to work done to show their learning). Students interviewed by Atwood et al. (2014) about SBG felt “that the grading system was rigorous and helped students improve” (p. 5) and that the system supported them in attaining their goals by showing them where they needed to work harder. Atwood et al. (2014) also feel that through SBG the responsibility for learning falls back on the student with teacher support and encouragement helping them to continuously improve.
Analysis

This literature review has looked at some contrasting views on grading. One researcher feels we should get rid of grades all-together (Kohn, 2011), while the majority of those reviewed feel that a switch to standards-based grading would be beneficial (Marzano & Heflebower, 2011; Noschese, 2011; Scriffiny, 2008; Wilcox, 2011). The research is pointing to a few important factors when it comes to grading. First, teachers need to clearly communicate their expectations to students as Raths et al. (1987) point out and is redefined through the research of Cox (2011) as he discusses with teachers how they feel standards-based grading is most effective. The research of Wright (2013) brought forward the need to use extensive feedback as a constructive communication tool. Second, teachers need to be aware of how grades are communicated to families. Although some still consider the letter grade the preferred method, most of the families studied by Guskey & Jung (2006) found SBG clear and detailed and desired this level of communication about their child (Guskey & Jung, 2006). A third thing to be aware of with grading is the teacher perspective. Teachers may be more willing to change their grading practices if shown the research done by Carberry et al. (2012) and Scriffiny (2008) who found the implementation of SBG simplified reporting and gave the teacher a better understanding of where their students were with their learning.

The research studied for this review appears unanimous when it comes to the idea that grades should clearly indicate what students know. Guskey and Jung (2006) point out that a single letter grade cannot provide the level of detail that SBG can. Many of the other researchers have found that teachers are in favor of providing grades based on the completion of specific standards and not including such things as effort and participation (Tierney, Simon, & Charland, 2011; Noschese, 2011; Clymer & Wiliam, 2007).
According to survey results from Wentzel (1997) on student motivation; the students were more motivated when they knew the teacher cared about teaching and made class interesting as well as taking the time to make sure the students understood the content. Also noted was when teachers provided constructive feedback, such as what happens in SBG. In analyzing the different studies, it is this researcher’s understanding that teachers support SBG and the in-depth communication they have with their students because of it, as they guide them in meeting the standards, as well as being able to gauge their instruction from these conversations. Other authors support the idea that students are not motivated by grades alone, but they can be motivated by seeing their learning grow over time (Marzano & Heflebower, 2011; Clymer & Wiliam, 2007).

Conclusions

In conclusion, the evidence found in support of using SBG has been ample. The power that SBG has to communicate with both parents and students is supported through several research studies (Clymer & Wiliam, 2007; Noschese, 2011, Wilcox, 2011). When investigating the connection between SBG and motivation in students however, there is a void of information. Student motivation has been clearly shown to increase when teachers use strategies such as detailed, constructive feedback as a communication tool (Noschese, 2011; Wilcox, 2011) which is a part of SBG, but I would like to see more evidence that by implementing SBG as a new grading tool, I will achieve the motivation I seek from my students.

In general, the studies reviewed show the current grading policies teachers use do not create the motivation educators seek. In fact, Kohn (2011) makes a strong statement when he says, “every study that has investigated the impact of grades on intrinsic motivation has found a negative effect” (p. 29). With general grading practices Wilcox (2011) claims, “students very
quickly come to understand that "learning" is about completing the task while avoiding making too many mistakes" (p.5); this is not how we want students to view education.

As a teacher, I feel that students should be given the chance to learn the content, even if that takes several attempts. Through the research I have found that others now support this idea as well, though that has not always been the case. Looking at the study completed by Raths et al. (1987), they found very few teachers would allow students the opportunity to rewrite papers. More recently, as found by Cox (2011), teachers in the participant group widely accept the policy of re-do’s or re-takes in their classrooms. This strategy, which is supported by SBG, allows students to continue their learning instead of feeling like their opportunity to succeed ends with the grade they get on a test. Shippy et al. (2013) felt that, “Standards-based grading allows students to be graded solely on mastery of course content, which can lead to student motivation and a meaningful learning relationship” (p. 14). My quest is to find out if this will hold true with my eighth grade students.

**Demographic Data for the Proposed Project**

The research will be conducted in a public school located in the Midwest region of the United States in the southwest suburbs of a large metropolitan area. The district is a mix of rural areas and small towns covering about 82 square miles. The district has three middle schools, each housing about 700-800 students in grades 6th-8th. The researcher’s school consists of 736 students with a teaching staff of 52 licensed teachers. The student body is fairly equally divided between boys and girls and has the following ethnicities: 84% white, 7% Hispanic, 6% Asian, and 3% black (USA School Info, 2015). The school has 17% of the students eligible for free and reduced lunch and 10% in special education.
The participants in the study will comprise of a section of 21 8th grade science students taught by the researcher. The class is equally comprised of boys and girls and supports a range of academic aptitudes. The demographics of the class are representative of the school. After doing a review of the literature there is some evidence to believe that using specific strategies can raise student motivation in the classroom. By incorporating the strategies of; descriptive feedback, small group instruction for struggling students, and re-takes on assessments, along with the implementation of the new standards-based grading system, the researcher will provide the kind of environment conducive to higher achievement. To find out whether a student’s motivation to learn also increases, is what drives this study.

The baseline data for the school to be studied showed that in the past only half of the students, on average, who received either a D or F on an assessment chose to re-take it. Although the school ranks above the nation’s average for reading, math, and science scores (science only tested in 8th grade), teachers still witness many students’ lack of motivation to improve their learning. This pattern of not taking advantage of re-take’s crosses over into all subjects, not just in the science classroom. The only exception being math, in which the students have to pass proficiencies in order to move ahead. Looking specifically at the class in which the study will take place, of the seven students who received either a D or F on past assessments, only one chose to re-take the assessment. Whether the lack of motivation is what causes the student to not take advantage of the opportunity to learn the material and re-take an assessment, or if the low grade is what is causing the lack of desire to improve, really is irrelevant. What this study aims to find out is if by implementing strategies that support SBG and using the new grading system itself will help motivate students to reach a proficient level on the SBG scale (and thereby increasing their knowledge of science).
Proposed Action

Research points to a few key strategies for successful standards-based grading. The three main ones I will address are: descriptive feedback, allowing re-do’s/re-take’s, and using a clear grading scale.

Several authors report the importance of descriptive feedback when communicating with students (Noschese, 2011; Shippy, Washer, & Perrin, 2013; Wilcox, 2011). In my professional experience with students, the more in-depth the feedback the better the student understands what they need to still work on, or where their learning has gaps. Shippy, Washer and Perrin (2013) state “When instructors are clear regarding which standards are mastered and which need more work, they can adjust instruction to help students” (p. 16). This speaks to the important relationship between student and teacher and the need for clear communication in order for students to be successful.

The idea of allowing for re-do’s or re-take’s to show student mastery is something I already adhere to in my classroom. When it comes to standards-based grading, students should be allowed to do things over since what we are looking for is proficiency of the standard, which won’t always happen the first time around. Through the use of re-do’s, students have the opportunity to show that they have indeed done the work to learn the standard.

Implementing a grading scale that is clear and easy to interpret makes the communication between both teacher and student and teacher and parents more beneficial. Using the designations of: no evidence shown, developing, proficient and accomplished, clearly states where the student is at with their learning of that particular standard. This also aligns with the importance of creating clear standards to begin with.
It is the belief of this researcher that all three of these strategies are instrumental when implementing standards-based grading and so all would be used in the study. There is more to SBG than just changing what the reporting system looks like, as noted above. The feedback is surely key, so that would be a focus strategy that would directly influence the student’s ability and motivation to work towards proficiency of the learning standard.

Data Collection and Analysis Methods

**Triangulation Matrix**

<table>
<thead>
<tr>
<th>Issue to pay attention to when trying to answer research question.</th>
<th>Date Source #1</th>
<th>Data Source #2</th>
<th>Data Source #3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student motivation</td>
<td>Researcher observations</td>
<td>Student survey (pre and post survey, Appendix A, additional post survey, Appendix B)</td>
<td>Small group interviews (Appendix C)</td>
</tr>
</tbody>
</table>

To answer the action research question I am going to have to look at signs of motivation from the students. Motivation as described by SparkNotes (2015) “is an internal process that make a person move toward a goal” (n.p.), in other words what causes us to act. One cannot witness motivation as such, but you can observe behavior that shows motivation. One strategy that the researcher will use to gather data will be classroom observations. Observations will be done by both the teacher/researcher and a third party (most likely another teacher from the same grade level), who will come in twice a week to observe. The observation form used by the researchers will have two columns, one for descriptive notes, and the other for reflective notes. The researchers will look to observe such things as body language, on-task behavior, persistence, poor attention, disruptive behavior, how students follow instructions, if students are asking/answering questions and other signs that show engagement and motivation. Many of the
observations will be directed towards interactions between student and teacher as the student seeks to understand how they can improve their learning, other observations will stem from daily activities in the classroom. Relevant conversations or comments should be recorded for future reference and analysis. As noted by Efron & Ravid (2013), the descriptive side of the notes will contain any details about the individuals, activities related to the study, interactions witnessed and dialogues. The reflective side of the notes should have the researcher’s insights and reflections about what they see and also about their own expectations and biases while doing the observation.

The student survey (Appendix A) will be given at both the beginning and end of the research study to compare changes in motivation. The survey focused on standards-based grading (Appendix B), administered at the end of the study, will give a broad view of how the students’ motivation was affected by the new grading system. The small group interview (Appendix C) was chosen instead of individual interviews so that students could better process their experience by sharing with classmates and reflecting through what others are mentioning. Personal experience has shown that students feel slightly less intimidated when they are in a small group of peers instead of one-on-one with their teacher. The researcher also is considering interviewing the group of students who chose not to re-take their past assessments to see how their motivation may or may not have changed.

In the quest to collect and analyze data from the study on motivation in the classroom, the researcher will look to three sources of qualitative data stemming from teacher observations, student surveys and student interviews. It is important to have the three sources to look at since individually they would not show the whole story. Teacher observations may not always
accurately tell the story of what is happening with students, but by following up with interviews one can get clarity on what is really going on.

The best time to do the observations would be during work time not during lecture when there is a higher expectation for students to be on task. As the teacher/third party observes the students while they are either working independently, with a partner or in groups they should be looking for the following behaviors: asking questions, getting clarity on feedback, asking where they can go to learn more about what they are struggling with and others that seem important to showing motivation to learn. Once the data has been collected it can be placed in a table outlining the themes. Some of the themes expected will stem from the above categories on what the teacher should be looking for. Another important factor for observation and another theme to be noted is student emotions, are they enthusiastic or bored or somewhere in-between?

The anonymous student pre and post-survey consists of general behavior questions. There is a second survey with more specific questions about standards-based grading to be given after the initial study. The results of the pre and post-survey will start to paint an overall picture of the students’ change in attitudes in the class and should be used to get a general feeling for the level of motivation. The changes can be noted on a spreadsheet or other organization tool to be analyzed. The specific questions about the new grading system can be tallied as to how many answered true or false to be able to analyze how the majority of the class feels about the new system. The surveys will give a better idea of what is going on in the minds of the students, something that cannot be witnessed by teacher observations.

A group interview was chosen so students will feel more comfortable talking and also to be able to reflect on the experience with their peers. It would be wise to record the interview to be reviewed at a later date rather than to rely solely on the researcher’s notes. During the
discussion the researcher should note attitudes of students and tone of voice for an indication of motivation to learn and how they feel the new system affected them. It would be best to do the interviews after the researcher has had time to analyze their observation notes so any clarifying questions could be asked along with the crafted interview questions (see appendix C). The themes that surfaced from the student surveys could also be brought up and discussed to make sure there was not a misinterpretation of results.

Overall, one of the themes expected to develop is the level of willingness/motivation to learn content that was not learned the first time that resulted in a poor assessment score. Another theme that may stem from the research would be how the strategies supported the students’ motivation to become proficient on the standards they were working on. A final theme may be one showing frustration or negativity towards the new grading system.

**Ideas for Sharing Findings**

There are several people to share the findings of this action research study with. First, I would share it with my colleague, another 8th grade science teacher, to see if she has any questions about the research. Her opinion is valuable as she is a veteran teacher with years of experience in which to draw from in critiquing the study and its results. Once comfortable with how the analysis was done and answering any questions she may have I would like to share the findings with the staff during the monthly staff meeting. Since the move in the district is towards standards-based grading, other teachers may find it beneficial to know what I experienced in the classroom while doing the study. Hopefully the results would be positive and would bring some relief to those that are nervous about implementing the new grading system. I would present the findings using a PowerPoint to show how the study was implemented, what strategies were used, how the data was collected and analyzed and the conclusions drawn. I would then share what I
feel the results mean as well as further questions that were brought up during and after the study. Finally, I would make the PowerPoint available to the district as a whole to see the results from someone in their own district who has studied the impacts on motivation while using standards-based grading.
References


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Appendix A

Student Survey (taken before and after study)

Please answer the following statements by marking only one box per line. Please choose the best descriptor for each statement (always, mostly, rarely or never).

<table>
<thead>
<tr>
<th></th>
<th>Always</th>
<th>Mostly</th>
<th>Rarely</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>In class I participate, volunteer comments and answers to questions, and ask relevant questions about material.</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I follow directions on tasks, maintaining attention until tasks are completed.</td>
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<td></td>
</tr>
<tr>
<td>When I don’t understand something I will ask the teacher for help.</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>I work hard to get a good grade, even if I don’t like a class.</td>
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<tr>
<td>When I get a formative assessment back I just look at the score I received, not at the questions I got wrong.</td>
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<td></td>
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</tr>
<tr>
<td>Even when the content does not interest me, I will keep working and try to learn it.</td>
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<tr>
<td>Even when I do poorly on a test I try to learn from my mistakes.</td>
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<tr>
<td>When I get a summative assessment back I just look at the score I received, not at the questions I got wrong.</td>
<td></td>
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</tbody>
</table>
Appendix B

Student Survey on Standards-Based Grading

Please think about the switch to standards-based grading that you have been experiencing in science and answer the following questions as they relate to you.

<table>
<thead>
<tr>
<th></th>
<th>True</th>
<th>False</th>
</tr>
</thead>
<tbody>
<tr>
<td>The use of detailed feedback on formative assessments has helped me to understand where I needed to focus my learning.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am motivated to re-do assessments that I have done poorly on.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>When I choose not to re-do the assessments it is because the content is too difficult.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have felt the switch to standards-based grading has supported me in my learning of the standards in science.</td>
<td></td>
<td></td>
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</tbody>
</table>
Appendix C

**Interview questions:**

1. Have you noticed a difference between the old way of grading and the new standards-based grading? Can you give me some details or examples of these differences?

2. Have you re-taken any summative assessments in the past? Why or why not?

3. Have you been motivated to re-take summative assessments during the time we have been doing standards-based grading? Why or why not?

4. How would you say your academic behavior has changed with this new grading system?

5. Do you feel more supported in your learning with SBG? How?

6. Are you more likely to take the time to learn the content now that it has been broken down into standards? Why or why not?

7. Would you prefer to continue with SBG, or would you like to go back to the old system? Why?

8. What other comments would you like to share about your experience with SBG?