

Effective Grading Practices in the Middle School and High School Environments

In this report, Hanover Research examines commonly recommended grading practices for middle school and high school teachers. Specifically, this report discusses standard-based grading, a practice that is growing in popularity. This report reviews the academic and anecdotal literature on which grading practices are deemed effective and which grading practices are ineffective. Included is a discussion of teacher, student, and parent reactions to standards-based grading systems and examples of how standards-based programs have been implemented in a number of U.S. middle and high schools.

Introduction

Because grading policies have a direct effect on the grades that students receive, it is extremely important that schools carefully consider what practices best measure student performance.¹ This is especially true considering that the annual cost of high school failure exceeds \$330 billion, a cost that better grading policies might be able to help reduce.²

Grading practices have long been a controversial issue among educators and academics. Though grades are accepted as a standard and inherent part of the U.S. education system, there is some disagreement as to what exactly is the function of grades. **There has been much debate over whether grades should be designed to communicate a student's performance in a variety of areas, including behavior and participation, or whether they should just represent a student's proficiency in a given subject.** Some educators have even questioned the value of using grades at all, claiming that using extrinsic rewards to reinforce learning teaches students to care more about their performance on assessments than on what they learn.³ **This report explores the debate surrounding grading policies and provides some suggested practices that have been commonly advocated by educators.**

Much of the debate surrounding grading practices revolves around the question of *what* should be included in grades. How this question is answered shapes the specific aspects of individual grading practices. The grading practices used by many teachers are designed to communicate student performance in a number of areas, including both academic achievement and behavioral factors such as student effort, conduct, and attitude.⁴ Educators often use grades as both a punishment for bad behavior and a motivational tool for good behavior.⁵ In contrast to these practices, **some educators now recommend that grades should not be based on behavior and other non-academic factors, but only on students' mastery of the material in a given subject.** Among other benefits, it has been argued that grading students on what they know and can do, and not on other factors, will help teachers provide students and parents with specific feedback on what learning areas need improvement.⁶

¹ Reeves, D. 2008. "Effective Grading Practices." *Educational Leadership*, 65:5, 85-87.

<http://www.ascd.org/publications/educational-leadership/feb08/vol65/num05/Effective-Grading-Practices.aspx>

² Ibid.

³ Edwards, C.; Edwards, L. 1999. "Let's End the Grading Game." *The Clearing House*, 72:5, 260-263.

<http://search.proquest.com/docview/196874778/12D2DC0C91F15650668/1?accountid=132487>

⁴ Allen, J. 2005. "Grades as Valid Measures of Academic Achievement of Classroom Learning." *The Clearing House*,

78:5. <http://search.proquest.com/socialsciences/docview/196865980/abstract?accountid=132487>

⁵ Wormeli, R. 2006. "Accountability: Teaching Through Assessment and Feedback, Not Grading." *American Secondary Education*, 34:3, 14-27.

<http://search.proquest.com/socialsciences/docview/195186514/12D1F1B91D039847B1D/9?accountid=132487>

⁶ Andy, F. et al. 2011. "The Grades Game." *Principal Leadership*, 11:6, 48-52.

<http://search.proquest.com/socialsciences/docview/845599493/12D247B3AA15D8CA3D1/3?accountid=132487>

Grading only on achievement is a key element of “standards-based grading,” a practice that is gaining in popularity. This model focuses solely on “students’ proficiency on well-defined course objectives.”⁷ It fundamentally changes what grades measure and how they communicate that information. While grading practices that emphasize only achievement and proficiency, such as standards-based grading, are gaining in popularity, these practices have still not been widely implemented. Through an extensive review of the literature, both academic and anecdotal, this report explores both the theory behind these new practices and their potential impacts and demonstrated effectiveness.

The report proceeds as follows:

Section One examines the theory behind various grading practices. This section explores how achievement-based practices, such as standards-based grading, have come to be highly recommended over more traditional methods. It includes a discussion of the practices, specifically those advocated by standards-based grading, that are now encouraged by educators and academics.

Section Two discusses the effects and effectiveness of standards-based grading practices for both teachers and students. This section considers the reactions of teachers, students, and parents to new, standards-based grading systems.

Section Three profiles a number of standards-based grading programs in place at middle schools and high schools across the country.

Key Findings

Our research yielded the following key findings.

Grading Practice Theories and Suggestions

- ❖ There are a wide number of educators and academics who agree that teachers and schools need to move away from taking non-academic factors, such as student conduct or teacher expectations of students, into account when assigning grades. Instead, it has been suggested that the best grading practices should only address students’ academic performance. As a result, grades could more easily be used to provide students, parents, and teachers specific and useful feedback.

- ❖ Most academics and educators agree that the following grading practices prevent grades from being accurate measures of student performance:

⁷ Scriffiny, P. 2008. “Seven Reasons for Standards-Based Grading.” *Educational Leadership, Expecting Excellence*, 66:2, 70-4.

http://www.ascd.org/publications/educational_leadership/oct08/vol66/num02/Seven_Reasons_for_Standards-Based_Grading.aspx

- Grading for Behavioral Issues
- Incorporating Teacher Expectations and Judgments into Grades
- Using Zeroes as a Punishment
- Using a Points System and Averages
- Grading Homework and Other Formative Assignments
- Grading on a Curve
- Allowing Extra Credit

The following are some remedies for the above ineffective grading practices:

- ❖ *Grading for behavioral practices:* A variety of commentators have suggested doing away entirely with assessing students on behavioral factors. One alternative is to still assign grades for behavior, but keep them separate from measures of students' performance.
- ❖ *Incorporating Teacher Expectations and Judgments into Grades:* Because incorporating teacher expectations and character judgments of students into grades can cause students to perform in ways and achieve grades that do not accurately reflect their abilities, it is recommended that teachers do their best to eliminate these practices and biases.
- ❖ *Using Zeroes as a Punishment:* One alternative method is to assign students a grade of "Incomplete" for work that is not turned in or is unsatisfactory and then require them to complete the work at other times. Another suggestion is to require students to attend special after-school or Saturday study sessions until the work is completed. Finally, teachers can allow students to turn in late work for reduced marks.
- ❖ *Using a Points System and Averages:* Using the median of a student's score to calculate grades can help eliminate a situation where a few bad scores skew what otherwise would be a good grade.
- ❖ *Grading Homework and other Formative Assignments:* Though there is a concern that students will be less likely to complete homework if it is not graded, some educators have found that replacing grades for homework completion with extensive and specific feedback leads to more accurate grades and does not cause completion rates to go down.
- ❖ *Grading on a Curve:* The problems caused by grading on a curve can be avoided by evaluating students in reference to specified learning criteria instead of the performance of their peers.

- ❖ *Allowing Students to Receive Extra Credit:* Awarding extra credit should be avoided because it skews the meaning of a student's grade by rewarding them for extra effort as opposed to achieving proficiency.

- ❖ All of the above remedies are incorporated into the practice of **standards-based grading**, which is designed to assess students only on their academic performance and proficiency, not on any behavioral factors. The common characteristics of a standards-based grading system include:
 - Students are graded either entirely or almost entirely on how well they progress toward learning objectives.
 - Standards-based systems measure only a student's most recent level of mastery over the course material.
 - In order to avoid distorting students' grades away from their actual level of proficiency, standards-based grading only incorporates summative assessments such as tests or essays, not formative assessments like homework.
 - Information from formative assessments can be used to provide valuable feedback to both the student and their parents.
 - Students can redo summative assessments until they have demonstrated proficiency.
 - Many standards-based systems use rubrics. Rubrics define the specific learning criteria against which teachers will compare a student's proficiency level.
 - Standards-based grading systems often use a scale different from A, B, C, D, and F to record students' grades on report cards. One common scale is 4, 3, 2, and 1. The scores provided in a standards-based system correspond to performance standards.

Grading Practices, Issues and Effectiveness

- ❖ Many teachers have celebrated standards-based grading practices for improving their classrooms and helping their students achieve content mastery. Indeed, a large number of the articles championing standards-based grading reviewed for this report were written by teachers or administrators. At the same time, there are a large number of teachers who have criticized new grading practices, questioning both their effectiveness and their practicality.

- ❖ Some teachers have complained about the increases in their workload caused by a proficiency-based system.

- ❖ Many teachers have raised concerns that not grading students on behavior will reduce student motivation.

- ❖ Some teachers do recognize the value of a standards-based grading system and agree with the basic tenets, such as not grading students on behavior or practice assignments.
- ❖ Many parents and students have had very negative reactions toward standards-based grading systems. Common complaints have been that standards-based grading generally reduces student grades and that it is hard to understand what grades mean under the new system. These reactions indicate that, as good as standards-based grading sounds in theory, it is still difficult both to implement such a system and to convince people of its worth.
- ❖ There is only minimal academic research on the effects of standards-based grading. The findings of two studies do suggest that standards-based systems do not have a negative effect on student motivation, even though they place a reduced emphasis on grades as rewards. In general, however, there is not enough research to make solid conclusions about the effects and effectiveness of standards-based grading.

Section One: Grading Practice Theories and Suggestions

There is no agreement on which grading practices are most effective at measuring and communicating student achievement. However, a survey of the relevant literature reveals that many educators and academics agree that the long-standing practices commonly used in U.S. elementary, middle, and high schools are imperfect and that there is room for improvement. This improvement most often means a shift away from imprecise systems that attempt to represent a wide variety of factors in a single grade and a move toward practices that are designed to measure **only students' academic performance and progression toward learning goals.**

Long-Standing Practices

There are a number of practices that educators have long implemented in their grading systems. Detailed in this subsection are some common traditional grading practices, most of which have been criticized by at least some educators and academics for reasons that will be fully explored later in this report.

The most common grading system used in U.S. schools is one that assigns students varying numbers of points for different degrees of achievement. In order to achieve high grades, students must earn a certain number of points. According to Jeffrey Erickson, in an article critical of traditional points-based systems written for *Principal Leadership*, “most students are like my daughter. At a very early age, they learn the point system and how school can be about the accumulation of points, not the accumulation of knowledge and skills.”⁸ **A common points-based system awards different assignments a score on a scale of 0-100.** Generally, students are awarded an “A” for scores of 90-100, a “B” for scores of 80-90, a “C” for scores of 70-80, a “D” for scores of 60-70, and an “F” for scores of 0-60. A student’s scores on individual assignments are recorded in a grade book and then averaged together at the end of the semester to calculate the final grade.⁹

Though, at first glance, a points-based system seems straightforward, the factors that influence how many points students receive on both individual assignments and final grades vary widely depending on teachers and schools. **When teachers assign grades, especially final grades, they are communicating a number of messages to students with a single mark.** According to Laurence Zoeckler, teachers often attempt to communicate messages that include “level of expectation, level of academic achievement, encouragement, and disappointment.”¹⁰ In order for students’

⁸ Erickson, J. 2011. “A Call to Action Transforming Grading Practices.” *Principal Leadership*, 11:6, 42-46.
<http://search.proquest.com/socialsciences/docview/84559939/12D2E7C9BE57F53A2E0/2?accountid=132487>

⁹ Erickson, J. 2010. “Grading Practices: The Third Rail.” *Principal Leadership*, 10:7, 22-24.
<http://search.proquest.com/socialsciences/docview/216292106/12D24E4A39A725AF4D1/4?accountid=132487>

¹⁰ Zoeckler, L. 2007. “Moral Aspects of Grading: A Study of High School English Teachers’ Perception.” *American Secondary Education*, 35:2, 83-102.
<http://search.proquest.com/socialsciences/docview/195188671/12D1DF3771F26083AE4/3?accountid=132487>

grades to effectively represent such varied meanings, teachers commonly assess students for a number of different factors. Provided below is a brief discussion of some of these factors.

Achievement

The one standard factor that all grading systems take into account is student academic achievement, here referring to students' mastery of specific learning standards.¹¹ In practice, this means using assignments that assess students' knowledge of course material. Scoring achievement is perhaps simplest for exercises such as a math examination, a situation in which scores can easily be assigned depending on whether a student got the question "right" or "wrong." In comparison, it is much harder to grade achievement for more open-ended assignments such as essays.¹²

Student Conduct and Behavior

Whether or not to grade for student conduct and behavior is one of the more contentious aspects of the debate on grading practices. According to a study quoted in an article by Thomas Guskey, for many teachers, "grades and other reporting methods are important factors in determining how much effort students put forth."¹³ This means that students are graded on nonacademic factors such as attendance, homework completion, poor academic integrity (i.e., cheating), and their ability to turn assignments in on time. Effectively, teachers use grades both to motivate students and to punish them.¹⁴

Assessing students on behavioral factors, such as effort and student conduct, is a very common practice and has long been accepted by the teaching establishment. **One small study found that, of 15 teachers interviewed, all "wanted their grades to reflect fairly both student achievement and effort."**¹⁵

Teacher Expectations and Character Judgments

Whether consciously or not, many teachers incorporate their own expectations of individual students into the grades they award. **A study of high school English teachers conducted by Zoekler found that teachers form expectations of students from previous performances and then grade students in comparison**

¹¹ Wormel, R. Op. cit.

¹² Zoekler, L. Op. cit.

¹³ Guskey, T. 2004. "0 Alternatives." *Principal Leadership*, 5:2, 49-53.

<http://search.proquest.com/socialsciences/docview/234995261/12D291B8820358D9E6A/3>

¹⁴ Wormeli, R. Op. cit.

¹⁵ McMillan, J. 2001. "Secondary Teachers' Classroom Assessment and Grading Practices." *Educational Measurement: Issues and Practice*, 20:1, 21.

to these expectations.¹⁶ The study found that when performance disagrees with these expectations the teacher's trust in the student can be undermined.¹⁷ Though the results of Zoekler's study were not definitive, it is possible that how a student's performance does or does not match teacher expectations could influence the grades assigned.

Zoekler's study also found that teachers often take their judgments of a student's character into account when assigning grades. For example, some surveyed teachers remarked that they might decide to pass a borderline student deemed to be of "good" character and fail a borderline student deemed to be of "bad" character.¹⁸

From an extensive survey of the literature, it becomes clear that there is no single grading practice that has been accepted as an established standard. Instead, teachers hold a significant amount of agency in determining both how to calculate grades and what factors to incorporate into grades.

Problematic Grading Practices and Recommended Solutions

Numerous educators and academics agree that teachers and schools need to move away from taking non-academic factors, such as student conduct or teacher expectations of students, into account when assigning grades. Instead, **it has been suggested that the best grading practices only address student achievement and "provide accurate, specific, timely feedback designed to improve student performance."**¹⁹ In order to achieve this goal, educators have recommended that a number of common practices be replaced with methods that more accurately record student performance and give students useful and specific feedback.

This subsection highlights the following practices that have been considered inaccurate and details their recommended replacements:

- ❖ Grading for Behavioral Issues
- ❖ Incorporating Teacher Expectations and Judgments into Grades
- ❖ Using Zeroes as a Punishment
- ❖ Using a Points System and Averages
- ❖ Grading Homework and Other Formative Assignments
- ❖ Grading on a Curve
- ❖ Allowing Students to Complete Extra Credit

¹⁶ Zoekler, L. Op. cit.

¹⁷ Ibid.

¹⁸ Zoekler, L. Op. cit.

¹⁹ Reeves, D. Op. cit.

Behavioral Issues

If grades are intended to measure student achievement, then they likely should not take into account students' behavioral issues. As previously discussed, many teachers use grades to assess students' effort, provide motivation, and to act as punishment for indiscretions. Specifically, teachers award points for basic classroom behaviors such as participating in class, completing homework, bringing materials to class, and getting midterm slips signed.²⁰ As a result, students who work hard can find their grades inflated, even if they do not have much mastery over the material, and students who work less can sometimes receive grades that belie their proficiency and understanding.²¹ Both of these situations reflect how factoring in behavior can distort grades.

Factoring in behavior can cause students who work hard to receive high grades that misrepresent their level of true comprehension of the material, and can cause students who work less to receive low grades that belie their proficiency and understanding.

One of the primary purposes of grades is to provide specific and accurate feedback on a student's ability and performance in relation to the course material. When teachers incorporate behavioral factors into students' grades, they eliminate the possibility of providing useful feedback on academic performance. An article published in *Principal Leadership* by Andy Fleenor et al. claimed, in reference to a struggling student named Amy:²²

In regards to improving performance, students are no different than adults. Amy did not need to be told to work harder, primarily because she didn't know what to focus on. Instead of vague, behavior-based remedies, she needed specific, learning-based remedies. Instead of a "work harder" treatment, she needed a "come in for extra help on solving equations" treatment. When told to focus on specific areas, students will succeed at a much higher rate than when they are offered overly general and nonspecific feedback, such as, "You need to pay more attention in class."

In order to provide the more specific feedback advocated by Fleenor et al., it is necessary to avoid incorporating too many behavioral factors into students' grades. Indeed, **a variety of commentators have suggested doing away entirely with assessing students on behavioral factors.**²³ One alternative to completely eliminating behavioral-based grades is to still assign grades for behavior, but keep

²⁰ Erickson, J. "Grading Practices: The Third Rail." Op. cit.

²¹ Fleenor, A. et. al. Op. cit.

²² Fleenor, A. et. al. Op. cit.

²³ See: Fleenor, A. et. al. Op. cit.

Erickson, J. "Grading Practices: The Third Rail." Op. cit.

Wormeli, R. Op. cit.

them separate from measures of student performance. Thomas Guskey explains how, in many Canadian secondary schools, students receive one grade for academic achievement and a second grade for behavioral issues such as homework completion, punctuality, class participation, and effort.²⁴ This practice still allows teachers to comment on their students' behavior, but does not conflate this with students' academic performance.

Teacher Expectations and Judgments

Some common grading practices have been criticized for not just taking into account students' behavior in the classroom, but also the expectations and moral judgments that teachers place on students. As previously described, a study of high school English teachers conducted by Zoekler found that **many teachers compare students' performances against how they expect the students to perform.** Even though the study was inconclusive as to whether the discrepancy between teacher expectations and student performance caused teachers to change the grades they assigned, it did imply that this effect undermined the trust between students and teachers.²⁵ The study suggested that, if this trust is undermined, student attitude can be negatively affected, which in turn can affect performance.²⁶

The effects that teacher expectations can have on student performance were famously described by Harvard professor Robert Rosenthal in his 1968 study, *Pygmalion in the Classroom: Teacher Expectation and Pupils' Intellectual Development*.

“When teachers expect students to do well and show intellectual growth, they do; when teachers do not have such expectations, performance and growth are not so encouraged and may in fact be discouraged in a variety of ways.”

- James Rhem

In this study, teachers were led to believe that certain students had demonstrated signs of a spurt in intellectual growth, when in reality they had been selected at random. At the end of the year, the students who the teachers expected to be more intellectually capable actually did show significantly greater intellectual development.²⁷ According to James Rhem, executive editor of *The National Teaching and Learning Forum*, Rosenthal's study reveals how, “when teachers expect students to do well and show intellectual growth, they do; when teachers do not have such expectations, performance and growth are not so encouraged and may in fact be discouraged in a variety of ways.”²⁸

²⁴ Guskey, T. “0 Alternatives.” Op. cit.

²⁵ Zoekler, L. Op. cit.

²⁶ Zoekler, L. Op. cit.

²⁷ Rhem, J. 1999. “Pygmalion in the Classroom.” *The National Teaching and Learning Forum*, 8:2.

http://www.ntlf.com/html/pi/9902/pygm_1.htm

²⁸ Ibid.

These results suggest that **grading practices heavily influenced by teacher expectations can cause students to achieve grades that do not accurately reflect their abilities.** Such grading practices have no place in a system designed to measure only students' academic performance.

Zoeckler's study found that teachers also let their moral judgments influence the grades they assign. This issue, like the incorporation of teacher expectations into grades, distorts grades so that they do not accurately measure academic performance. Though the obvious solution to both of these issues is simply for teachers not to consider either their expectations of students or their moral judgments of students when calculating grades, sometimes teachers incorporate these factors into grades unknowingly. As such, there are few practical recommendations for ways to overcome these issues. Rosenthal himself recognized the difficulty in overcoming the tendency for one's own perceptions of students to affect outcomes, admitting, "we don't know what to do with these findings."²⁹

"Zero" Grades as a Punishment

One oft-criticized grading practice that is more easily overcome than either the incorporation of behavioral characteristics or teacher perceptions into grades is the use of zeroes as punishments for incomplete work or other student indiscretions (e.g., tardiness, academic dishonesty). **Many educators and academics have criticized the practice of assigning zeroes as one that unfairly punishes students and causes their grades to reflect factors other than their academic achievement and proficiency in a subject.**³⁰ The problems associated with the use of zeroes are closely connected to those discussed in regard to grading students on behavioral factors.

Teachers often award zeroes to students for work that is late or incomplete.³¹ Sometimes zeroes are also assigned as a punishment for factors completely unrelated to academic achievement, such as misbehaving in class or ignoring teacher warnings.³² If a teacher uses a points system that determines grades by averaging together all of a student's scores over the course of a semester, then **assigning just a few zeroes can prevent a student from achieving academic success.**³³ This is true even if students perform well on all other assignments because of the way that

²⁹ Rhem, J. Op. cit.

³⁰ See: Reeves, D. Op. cit.

Wormeli, R. Op. cit.

Erickson, J. "Grading Practices: The Third Rail." Op. cit.

Guskey, T. 2000. "Grading Policies that Work Against Standards...and How to Fix Them." *National Association of Secondary School Principals Bulletin*, 84:620, 20-29.

<http://search.proquest.com/socialsciences/docview/216041405/12D1E62D23375C09717/2>

³¹ Ibid.

³² Guskey, T. 2004. "0 Alternatives." Op. cit.

³³ Guskey, T. "Grading Policies that Work Against Standards...and How to Fix Them." Op. cit.

zeroes skew averages. A student who normally receives “A”s on completed assignments can end up with a final grade of “C” due to a few behavioral infractions.

One common defense for using zeroes as punishments for behavior is that there are consequences for not completing tasks in “the real world.”³⁴ As valid as this argument may be, **commentators who criticize grading on behavior have claimed that it is far better, and more in line with the expectations of the “real world,” to accept late assignments rather than award zeroes.** According to Erickson, “in the real world, failure to complete a task rarely results in not needing to complete the task.”³⁵

Some educators and academics have suggested a number of different methods for dealing with the problems caused by assigning zeroes. One method that has been suggested is assigning students a grade of “Incomplete” for work that is not turned in or is unsatisfactory and then requiring them to complete the work at other times.³⁶ Guskey suggests that students should not be “let off the hook” for incomplete work, but should instead be made to attend special after-school or Saturday study sessions until the work is completed.³⁷ Another suggestion is to allow students to turn in late work for reduced marks. For example, a few points could be taken off for each day

“In the real world, failure to complete a task rarely results in not needing to complete the task.”

- Jeffrey Erickson

an assignment is late.³⁸ **An assignment could even receive two different grades, one indicating a student’s progression toward learning goals and one indicating a student’s ability to turn in work on time.**³⁹ These policies reduce the amount that a student’s compliance to a behavioral policy, completing work by a certain date, factors into their final grade.

Some educators and academics have recommended that the use of zeroes as a punishment for other behavioral issues than late work, such as cheating or misbehavior, should be abandoned entirely. Erickson suggests that instead of punishing students with a zero for a behavioral indiscretion (in this case, cheating), the focus should be on “learning from the mistake; determining the root cause of it; and working as a team with parents, teachers, principals, and the student to make sure it doesn’t happen again.”⁴⁰ Erickson recommends that different punishments, such as revoking privileges, should be used in place of assigning zeroes.⁴¹

³⁴ Erickson, J. “A Call to Action Transforming Grading Practices.” Op. cit.

³⁵ Ibid.

³⁶ Ibid.

³⁷ Ibid.

³⁸ Wormeli, R. Op. cit.

³⁹ Ibid.

⁴⁰ Erickson, J. “A Call to Action Transforming Grading Practices.” Op. cit.

⁴¹ Ibid.

In summary, using zeroes as a punishment either for late work or for behavioral issues distorts grades away from being true representations of students' academic performance. If measuring academic performance is the ultimate goal of grades, then zeroes, as Wormeli writes, are "inaccurate portrayals of mastery that are unjustified ethically and mathematically."⁴²

Point Systems and Averages

Related to the criticisms directed at the use of zeroes as punishment, the use of systems that calculate grades by averaging together the points that students have achieved on assignments over the course of a semester has also been criticized as unfair and likely to distort a student's true academic accomplishments. **Averaging in a points system that values all assignments equally can create a situation where a few bad scores inaccurately skew a student's final grade.** If students receive bad grades early in a semester they can lose all hope of achieving a good final grade, even if they significantly improve their performance.⁴³

In the place of a system that averages scores over the course of an entire semester, teachers could weight assignments at the end of a semester more heavily than those at the beginning.⁴⁴ This would prevent situations where students lose any chance of achieving a good final grade because of a few bad grades early in a semester. This being said, it has also been recommended that teachers avoid weighting any one assignment too heavily at the end of a semester, a practice that can either inaccurately help or hurt a student's grade.⁴⁵

A simple strategy that can be used to combat unfair grades caused by the points system is replacing the mean with other measurements of central tendency such as median.⁴⁶ **Using the median of a student's score to calculate grades can help eliminate a situation where a few bad scores skew what otherwise would be a good grade.** For example, if on seven assignments a student scores 91, 46, 89, 92, 53, 87, and 85, then the mean of his or her scores would be 77.6, typically a "C." On the other hand, the median of the student's scores would be 87, typically a "B" and probably a better reflection of the student's grades considering the majority of the scores were in the high 80s or low 90s.

⁴² Wormeli. Op. cit.

⁴³ Erickson. "Grading Practices: The Third Rail." Op. cit.

⁴⁴ Reeves, D. Op. cit.

⁴⁵ Ibid.

⁴⁶ O'Connor, K. "ETS Assessment Training Institute: 15 Fixes for Broken Grades." Webinar hosted by ETS Assessment Training Institute. http://www.elko.k12.nv.us/pdf/grading/grading_fixes.pdf

Grading Homework and Other Formative Assignments

Some educators and academics have recently criticized the practice of grading homework and other formative assessments. **This practice has been criticized for rewarding students for being compliant, hard workers while not necessarily communicating anything meaningful about students' mastery over course material.**⁴⁷ These issues are compounded if homework grades are used in a points system that assigns zeroes for uncompleted assignments and calculates final grades through averaging. Students who are capable could seriously damage their grades by failing to complete a number of homework assignments.

Some commentators have gone so far as to recommend eliminating graded homework. Fleenor et al. compare homework to sports practices:⁴⁸

Practice, in school, includes homework and classwork. This is where teachers instruct and students use that instruction to solve problems or draw conclusions or make connections. Teachers use practice to gauge progress and prepare for the future. Next are the scrimmages – “quizzes” - that enable the teacher to check the pulse of the class. Quizzes shouldn't define a student's success or failure, but should instead be a barometer for both the teacher and the student about the progress being made. After scrimmaging (and discussing the successes and failures of the scrimmage), it's time for a game, or test.

Under the model proposed by Fleenor et al., a student's performance on summative assessments like tests becomes more important in determining the final grade than his or her performance on formative assessments like homework.

There are obvious concerns that students will be less likely to complete homework if it is not graded. However, **at least some educators have found that replacing grades for homework completion with extensive and specific feedback does not cause completion rates to go down.**⁴⁹ Patricia Scriffiny, a math teacher at Montrose High School in Montrose, Colorado, found that providing specific feedback, but not grades, on homework sent students the message that it was important they complete these assignments as practice.⁵⁰ Under Scriffiny's system, completion rates did not change and students were likely to complete as much homework as was necessary for them to master the course material. She explains:⁵¹

⁴⁷ Fleenor, A. et. al. Op. cit.

⁴⁸ Ibid.

⁴⁹ Scriffiny, P. 2008. “Seven Reasons for Standards-Based Grading.” *Educational Leadership*. 66:2, 70-74.
http://www.ascd.org/publications/educational_leadership/oct08/vol66/num02/Seven_Reasons_for_Standards-Based_Grading.aspx

⁵⁰ Ibid.

⁵¹ Ibid.

Some students don't do all the homework that I assign, but they know that they are accountable for mastering the standard connected to it. Of course, not every student who needs practice always does so, but I am amazed and encouraged that students ask me for extra practice fairly regularly.

Grading on a Curve

Grading on a curve is another common practice that has been criticized for distorting the meaning of student grades. When teachers grade on a curve, they assign grades according to how students compare to their peers. As a result, grades assigned in this system do not accurately reflect students' proficiency with course material. Guskey claims that, under this system:⁵²

High grades are attained not through excellence in performance, but simply by doing better than one's classmates. As a result, learning becomes a game of winners and losers, and because the number of rewards is kept arbitrarily small, most students are forced to be losers.

Grading on a curve creates a sense of competition within a class that can be counterproductive and diminish student motivation.⁵³ Students who perform well can find themselves the targets of their classmates' anger and students who perform poorly can find themselves angry and frustrated, sometimes to the point that it contributes to their failure.⁵⁴

The problems caused by grading on a curve can be avoided by evaluating students in reference to specified learning criteria rather than the performance of their peers. As Carol Ann Tomlinson writes, "grading should be criterion referenced. That is, educators should establish indicators of student success, describe the criteria by which they will evaluate student success, and measure students accordingly."⁵⁵

Extra Credit

The practice of giving students extra credit assignments has likewise been criticized for its tendency to distort grades away from being simple measures of performance and content or concept mastery. Erickson refers to extra credit as a "lethal practice" for the way that it rewards students for non-academic factors like bringing in school supplies.⁵⁶ **Even if extra credit is awarded for a semi-academic reason like the completion of an extra assignment, it still skews the meaning of a student's grade because it rewards them for extra effort as opposed to achieving proficiency.**

⁵² Guskey, T. "Grading Policies That Work Against Standards...and How to Fix Them." Op. cit.

⁵³ Tomlinson, C. "Grading and Differentiation: Paradox or Good Practice." *Theory into Practice*, 44:3, 262-269. <http://search.proquest.com/socialsciences/docview/218832548/12D3438630A6480B937/1?accountid=132487>

⁵⁴ Guskey, T. "Grading Policies That Work Against Standards...and How to Fix Them." Op. cit.

⁵⁵ Tomlinson. Op. cit.

⁵⁶ Erickson, J. "Grading Practices: The Third Rail." Op. cit.

Standards-Based Grading

Standards-based grading is a comprehensive system that incorporates all of the remedies for ineffective grading practices outlined above. **Standards-based grading is designed to assess students only on their academic performance and proficiency, not on any behavioral factors.** In a standards-based system, students are measured against specific academic standards, not their peers. **Standards-based grading (sometimes referred to as proficiency-based or standards-referenced grading) systems are gaining in popularity across the United States.** According to an article in *The New York Times*, standards-based grading programs are “flourishing around the country as the latest frontier in a 20-year push to establish rigorous academic standards and require state tests on the material.”⁵⁷

According to Scriffiny, a **standards-based grading system “involves measuring students’ proficiency on well-defined course objectives.”**⁵⁸ Students are **graded either entirely or almost entirely on how well they progress toward these objectives.** Provided below is an outline of standards-based grading practices as they have been employed by the Edmonds School district in Lynnwood, Washington. The system is presented in comparison to traditional grading practices.

Table 1: Standards-Referenced Grading Practices, Edmonds School District⁵⁹

Standards-Referenced	Traditional
Directly related to standards	Usually related to assessment methods
Achievement only	Mix of achievement, attitude, effort and behavior
From summative assessments only	From formative and summative assessments
Recent information only	Everything marked included
Uses current learning trend	Uses averages
Individual	Often includes group marks
Derived from quality learning assessments	Huge variation in assessment quality
All aspects discussed with, and understood by, students	Teacher decided and announced

⁵⁷ Hu, W. “Report Cards Give up A’s and B’s for 4s and 3s.” *The New York Times*, March 24, 2009. http://www.nytimes.com/2009/03/25/education/25cards.html?pagewanted=1&_r=1

⁵⁸ Scriffiny, P. Op. cit.

⁵⁹ Edmonds School District. 2008. “Standards-Referenced Grading.” <http://staff.edmonds.wednet.edu/tl/Elem/pdefs/resources/ElegradingCF.pdf>

The standard-based grading system implemented by the Edmonds School District incorporates most of the suggestions outlined in the previous subsection. **This standards-based system is designed to measure only a student's most recent level of mastery over the course material.** It is very clearly designed *not* to incorporate factors that do not measure recent academic performance, such as behavior and formative assessments like homework, into a student's grade.

One of the most important defining characteristics of a standards-based grading system is how it treats formative and summative assessments. In order to avoid distorting students' grades away from their actual level of proficiency, **standards-based grading only incorporates summative assessments such as tests or essays into a student's grade.** This being said, standards-based grading systems still value formative assessments. In the Edmonds School District model, for example, formative assessments continue to be used for the following:⁶⁰

- ❖ Guide instruction for individual students or for a whole class
- ❖ Introduce criteria, allow for feedback, self-assessment, and guided practice
- ❖ Focus on individual or group learning
- ❖ Informal observations, quizzes, homework, teacher questions, worksheets
- ❖ Information can be used for progress report comments

Formative assessments provide students with the opportunity to practice the skills that they are developing through the curriculum. Additionally, they give teachers feedback on their students' progression, allowing them to modify their instruction for the needs of the class. **Teachers can use a student's performance on formative assessments to supply valuable information to both the student and his or her parents.** In comparison to formative assessments, standards-based grading systems treat summative assessments as the only means capable of accurately supplying the necessary information to award students grades. According to Edmonds School District, summative assessments are:⁶¹

- ❖ Used to make a decision about student learning at the end of a period of instruction for progress report
- ❖ Based on known criteria
- ❖ Used after students have been given opportunities to practice skills
- ❖ Focused on individual student performance
- ❖ Formal observations, tests, projects, reports

Summative assessments test students on specific skills or knowledge that they have acquired with the help of formative assessments. In a standards-based system,

⁶⁰ Edmonds School District. Op. cit.

⁶¹ Ibid.

summative assessments are the main factors used to assess whether or not students have mastered the course material and to determine students' grades. Standards-based grading is based on the assumption that it is best to only assess students at the end of a grading period, after they have gotten the chance to develop certain learning skills. Scriffiny explains that in her class she does not give a summative assessment until she is “confident that a reasonable number of students will score proficiently.”⁶²

In some standards-based grading models, students can redo summative assessments until they have demonstrated proficiency.⁶³ This method ensures that students have multiple chances to become proficient at their own pace. An article published in *The Oregonian* on standards-based grading in Oregon public schools notes, “‘It used to be in the first six weeks, if a student got an F, they gave up,’ says Principal John O’Neill. ‘Now, they have all year to bring up the grade by retaking until they ‘get’ that skill.’”⁶⁴

In order to assess a student’s level of proficiency, most standards-based grading systems use scoring rubrics. **Rubrics define specific learning criteria against which teachers compare a student’s proficiency level.**⁶⁵ The following table is a sample rubric for an English class provided by Scriffiny:

Table 2: Sample Rubric for a Standards-Based Grading System⁶⁶

Name	Objective 1: Write an alternate ending for a story	Objective 2: Identify the elements of a story	Objective 3: Compare and contrast two stories
John	Partially proficient	Proficient	Partially proficient
Bill	Proficient	Proficient	Partially proficient
Susan	Partially proficient	Partially proficient	Partially proficient
Felicia	Advanced	Proficient	Proficient
Amanda	Partially proficient	Advanced	Proficient

Because this rubric measures students on specific learning goals, it is easy to provide students and parents with useful feedback. Additionally, teachers can use the information to adjust the instruction they provide to individual students.⁶⁷

⁶² Scriffiny, P. Op. cit.

⁶³ See: Scriffiny, P. Op. cit.

Hammond, B. et. al. “Portland-Area Schools Debate Proficiency-Based Education.” *The Oregonian*, February 24, 2010. http://www.oregonlive.com/education/index.ssf/2010/02/portland-area_schools_debate_p.html

⁶⁴ Hammond, B., et. al. Op. cit.

⁶⁵ California Department of Education Publication. “Grades and Effective Standards-Based Reporting.” <http://pubs.cde.ca.gov/tcsu/ch1/grdstndrdbasdrptng.aspx>

⁶⁶ Scriffiny, P. Op. cit.

⁶⁷ Scriffiny, P. Op. cit.

Standards-based grading systems often use a scale different from A, B, C, D, and F to record students' grades on report cards. One common scale is 4, 3, 2, and 1. Provided below is an example of how these scores can relate to performance standards in a standards-based grading program:

Table 3: Meanings of Scores in a Standards-Based Grading System*⁶⁸

Performance Level	Performance Description
4	Exceeding the standard
3	Meeting the standard
2	Progressing toward the standard
1	Little to no progress toward standard

*Source: Rockdale County Public Schools, Rockdale County, GA

Ultimately, standards-based grading is based on the core idea that “a grade is supposed to provide an accurate, undiluted indicator of a student’s mastery of learning standards.”⁶⁹ In the process, a standards-based grading system seeks to imbue grades with specific meanings that are easy for students, parents, and teachers to understand.

⁶⁸ Rockdale County Public Schools. 2009. “Standards-Based Report Cards: Linking Curriculum, Instruction, and Assessment.” <http://www.rockdale.k12.ga.us/schools/cjh/Shared%20Documents/Parent%20Brochure-Standards%20Based%20Grading%20System.pdf>

⁶⁹ Wormeli, R. Op. cit.

Section Two: Grading Practices, Issues and Effectiveness

A number of sources agree that the best grading practices for middle and high schools are those that only assess academic achievement. Standards-based grading is the most common example of such a system. Despite the wealth of literature on effective grading practices, methods like standards-based grading are yet to be widely implemented and have sometimes received mixed reactions from teachers, students, and parents. Unfortunately, the extensive survey of literature conducted for this report was unable to find many academic studies comparing the effectiveness, in terms of both student achievement and the validity of grades as representative markers of student achievement, of different grading practices. This section examines the reactions to standards-based grading systems and, as much as possible, explores the effectiveness of this method.

Teacher Reactions

High school and middle school teachers are among the most vocal commentators on the efficacy of new grading practices such as standards-based grading. **Many teachers have celebrated such systems for improving their classrooms and helping their students.** Indeed, a large number of the articles championing effective grading practices reviewed for this report were written by teachers or administrators.⁷⁰ **At the same time, there are many teachers who have criticized these new grading practices, questioning both their effectiveness and their practicality.**

Many of the authors of the articles advocating standards-based grading reviewed in this report are themselves teachers and administrators. Unsurprisingly, these commentators have had only positive things to say about how adopting a standards-based system has affected their classes. Three examples follow:

If we base our grades on standards rather than attendance, behavior, or extra credit (which often has nothing to do with course objectives), we can actually help students grapple with the idea of quality and walk away with a higher degree of self-sufficiency.⁷¹

When we decided to limit the weight of formative assessment, teachers expressed the concern that students would stop completing daily assignments because they were worth so little. Yet the scores on the summative assessments were strong. This has caused a critical analysis of homework in our buildings: do daily assessments support the learning goals for the unit?

⁷⁰ See: Sciffiny, P. Op. cit.

Erickson, J. "A Call to Action Transforming Grading Practices." Op. cit.

Wormeli, R. Op. cit.

Fleenor, A. et. al.

⁷¹ Sciffiny, P. Op. cit.

As our practices evolve, true formative assessments - ones that provide feedback to students and teachers - are becoming part of the culture in Minnetonka's schools.⁷²

"Work harder" becomes "work harder on understanding the causes of World War II" and "pay more attention in class" becomes "you need to be able to discuss the steps of photosynthesis." These changes foster an environment of assistance and learning, rather than resentment and frustration. No one wants to fail, but no one wants to guess as to how to pass. Specifics that are based on learning targets are key to this culture change.⁷³

These teachers and administrators emphasize how adopting a standards-based grading system has helped their school districts provide students with assessments and grades that are more meaningful than those under a traditional system. **They claim that because the grades they assign in a standards-based system are tied to clearly defined performance standards, it is easier for them to provide students with useful feedback about their knowledge and abilities.**

To obtain a better sense of how teachers have generally reacted, not just those who are active advocates for standards-based grading, it is useful to look at how these new methods have been received in a variety of contexts. A number of school districts in Oregon recently implemented a "proficiency-based" grading system that follows the basic model of a standards-based system: little to no credit for homework, attendance, classwork, or extra credit; grading for proficiency; and allowing students to redo assessments.⁷⁴ These practices are the centerpiece of Oregon's planned school reform.⁷⁵ Some teachers have celebrated the system for its effectiveness. Mark Sprenger, a math teacher, explains, "I can't believe I didn't use this method for the past 10 years." In contrast to these sentiments, some teachers have complained that there is little solid evidence that the program is actually effective.⁷⁶ One high school that has adopted the program has seen math scores improve, but not more than reading and writing scores, which have been taught under the traditional methods.⁷⁷ Evidence of the program's effectiveness is hard to come by both because it is so new and because it has been implemented mainly with high school freshman, who do not take state tests.⁷⁸

Some teachers in Oregon have also voiced complaints about increases in their workload caused by the proficiency-based system. One English teacher complained about the need to work 50 hours a week to have the time to provide

⁷² Erickson, J. "A Call to Action Transforming Grading Practices." Op. cit.

⁷³ Fleenor, A. et. al. Op. cit.

⁷⁴ Hammond, B. Op. cit.

⁷⁵ Ibid.

⁷⁶ Ibid.

⁷⁷ Ibid.

⁷⁸ Ibid.

extra feedback on assignments and grade test re-takes.⁷⁹ In general, in Oregon, opinion on the program seems to be divided, with some teachers complaining of lack of time and training and others believing it is worth the extra work.⁸⁰

Online discussion boards also provide useful insight into teachers' reactions to standards-based grading practices. On *theteacherscorner.net*, an online forum designed for school teachers, a discussion of a book advocating standards-based grading – *A Repair Kit for Grading: 15 Fixes for Broken Grades* by Ken O'Connor – generated a wide range of responses from teachers.⁸¹ Like other standards-based systems, the practices advocated by O'Connor are designed to produce grades that consistently and accurately reflect a school's performance standards and learning outcomes, and nothing else.⁸² O'Connor's book recommends practices such as not assigning zeroes, not grading on any behavioral factors, and accepting late work.⁸³ At best, these suggestions received mixed reactions from teachers commenting on *theteacherscorner.net*. **Many commenters raised objections to the suggestion that they not incorporate behavior into grades, claiming that such a practice would reduce student motivation.** Some responses to O'Connor's system follow:⁸⁴

I find I don't agree with most of these fixes...

6th grade students do not understand that assignments are designed for them to practice specific objectives and hone their study skills. I know that my students will not do assignments that they are not held accountable for. They have already become in tune with teaching practices of not taking grades on everything and often ask if I am taking a grade on an assignment. Translation: If you aren't taking a grade, I'm not going to bother doing the assignment.

This is another one of my big problems. The book argues that we are supposed to be measuring achievement, not work ethic. I feel like there does need to be some kind of penalty for late work otherwise, why complete the assignment on time. What happens if you pay a bill late? Late fee. Some deadlines in the real world can be flexible and if a student comes to me in advance about a problem with meeting a deadline, I'm flexible too.

Don't factor attendance into grades. I would love to know how your district deals with students who are habitually tardy for significant portions of the school day or have excessive absenteeism?

⁷⁹ Hammond, B. Op. cit.

⁸⁰ Ibid.

⁸¹ The Teachers Forum. 2009. "A Repair Kit for Grading 15 Fixes for Broken Grades." Online Discussion Board. <http://www.theteacherscorner.net/forums/showthread.php?t=7940>

⁸² Pearson, Assessment Training Institute. "A Repair Kit for Grading: 15 Fixes for Broken Grades," by Ken O'Connor. <http://www.assessmentinst.com/a-repair-kit-for-grading-15-fixes-for-broken-grades/>

⁸³ O'Connor, K. "ETS Assessment Training Institute, 15 Fixes for Broken Grades." Webinar. http://www.elko.k12.nv.us/pdf/grading/grading_fixes.pdf

⁸⁴ The Teachers Forum. Op. cit.

I, too, have a problem with not deducting points for late work. I completely agree with the poster who already mentioned what happens if you pay a bill late. There should be some sort of consequence.

These teachers questioned how they could motivate their students without grading students on behavior, feeling that these concerns had not been adequately answered by the theory of standards-based grading. In response to these complaints, proponents of standards-based grading like Guskey and Erickson would probably claim that teachers should use methods other than grades to deal with students' behavioral issues.⁸⁵

Not all commenters on theteacherscorner.net were entirely skeptical of standards-based grading; some were cautiously enthusiastic about the prospect of implementing at least some parts of such a system:⁸⁶

Many of us (in my school system) came to the consensus that we have inherited some of the faulty grading practices of our school days. I'm looking forward to reflecting upon my grading practices and making some reforms based on what I have read.

There are good points for pondering in regards to assessment. I don't know that all of them need to be adopted at the same time or to the same degree.

I'm actually planning on trying a few this year. I'm dropping my participation/preparation grade. I plan on ramping up my classroom monetary system in its place. I don't give much practice homework in social studies but, this year I will be teaching math as well. I plan on experimenting with not grading students' practice homework. I think it's a bad idea but our administration wants feedback from people that have tried out some of the strategies in the book. We'll see how it turns out. I still plan on giving zeroes for work that is not turned in and I still plan on deducting points for work that is not turned in on time.

At least two of the teachers commenting also agreed that students should not be graded on behavioral factors like work ethic, even if they might like to:⁸⁷

As far as grading on work ethic - nothing drives me crazier than one of my gifted kids doing NO work at all and acing the assessment. This, however, is my problem and not his. If s/he doesn't have to do any work and can still ace the assessment the work is not appropriate for that student. On the other hand, you can have a struggling student work really, really, really hard and still not understand the concept. In good conscience, I can't pass that child

⁸⁵ See: Guskey, T. "0 Alternatives." Op. cit.

Erickson, J. "A Call to Action Transforming Grading Practices." Op. cit.

⁸⁶ The Teacher's Forum. Op. cit.

⁸⁷ Ibid.

because they “worked hard.” They’ll never understand division if they didn’t understand multiplication no matter how hard they worked. AND...work ethic is truly subjective. How do you know how hard a student worked? It (standards-based grading) is definitely not a perfect system, but I think that for the most part it does help set students up for success.

Behavior should NEVER enter into an assessment - there should be other consequences for that. Again, the standards say that Johnny will multiply fractions, not that Johnny will multiply fractions with a good attitude.

Giving a zero is like saying to students “It’s okay, you failed...no problem.” What have they learned? Make them do it! They will discover that putting in some effort is better than putting in none, and they will learn more too...

These comments reveal that some teachers do recognize the value of a standards-based grading system and agree with basic tenets like not grading students on performance. Overall, the teacher comments on teacherscorner.net provide an interesting perspective on how teachers feel about these new grading practices. These comments are not the most reliable source and should not be used to make firm conclusions. Still, they do suggest that **while many teachers are still skeptical of standards-based grading practices, there are movements in the teaching community to support these new methods.**

Student and Parent Reactions

The teacher debate over the value of standards-based grading is reflected by the differing reactions of students and parents. Just as with teachers, **some students and parents agree with the theory of standards-based grading, while others are very skeptical.**

In Oregon, the recently implemented “proficiency-based” system has caused mixed reactions among students and parents. **One major concern is that the new system will affect students’ college prospects because it is different and untried.** One parent claimed, “I told my daughter ‘You’re a guinea pig basically, so you’re just going to have to deal.’”⁸⁸ These concerns are reflected in comments taken from a Facebook page titled “I Hate the Proficiency Scale” created by Oregon middle school students.⁸⁹

Considering the pressures on students of this age to be accepted by colleges, it is understandable that they would be concerned about how different types of grades would be viewed by colleges. Facebook postings are not a precise means to measure student perceptions and, as such, firm conclusions should not be made from these

⁸⁸ Hammond, B. Op. cit.

⁸⁹ Facebook. 2010. “I Hate the Proficiency Scale.”
<http://www.facebook.com/group.php?gid=156632171665&v=wall>

comments. However, they do provide useful anecdotal evidence on how at least some students view standards-based grading.

Students in Oregon have commented directly on the effectiveness of the proficiency-based system. Many Facebook comments reflect students' confusion over the meaning of grades in the new system. Some students have also expressed frustration over how being marked "Highly Proficient," "Proficient," or "Not Yet Proficient" often results in lower grades than they are used to:⁹⁰

The worst part in my opinion is not knowing your real grade, but there is a satisfying feeling when you get Proficient or Highly Proficient. But then there's Nearly Proficient... What does this even mean? You aren't good enough to be OK? GOD this makes me feel weird. It's like saying "Your good, but not good enough. Get better." At what? because they never actually tell you what to do better at.

I got a 8/10 on a section my math test and got a WT. Which means i have to spend 2 weeks showing my teacher that I know how to do the type of math on my test. 8/10 = 80%. WT = D/F? Justification? Oh yeah i need to have all proficents to pass the class. So yay, I have to pretty much get 95% on all my test to PASS MY CLASS.

It's so hard to get an "A" too, because "highly proficient" usually means that you have to get 100% instead of 90%

These comments suggest that some students are confused and frustrated by the scale used by Oregon's proficiency-based system. One way to interpret this confusion and frustration is as an indication that the system is working by holding students to higher performance standards. On the other hand, **the student comments above could indicate that the Oregon system has failed to effectively communicate to students what grades in the new system represent.** This is particularly concerning considering that one of the major aims of standards-based grading is to imbue grades with clear and specific meanings.⁹¹

Even some individuals who support the overall concept behind standards-based grading have been critical of Oregon's new proficiency-based system. For example, one parent commented:⁹²

I agree with the concept of proficiency, but am SERIOUSLY concerned over the execution... It appears to be an advantage to those students who need to go over the same concept repeatedly, but leaves those who could be moving on in a cycle of waiting for the others to catch up. I think they spent 1/2 the year on multiplication and barely touched on fractions. When papers

⁹⁰ Facebook. "I Hate the Proficiency Scale." Op. cit.

⁹¹ Scriffiny, P. Op. cit.

⁹² Facebook. 2009. "I Love the Proficiency System!" <http://www.facebook.com/group.php?gid=169730893001&v=wall>

were marked all they showed was a “P”, yet my child got all the problems right. There were no comments on how to do better, because this was good enough as far as the district was concerned. When I asked how my child could get the higher mark of 4, they told me the bright child would know, but that most papers were only worth a 3 because they were grade level concepts...At what point does getting 100% on your tests only equal a 3, or proficient? Why are they not providing extended concepts for students who could be doing harder work so they can show that they can do it and get a 4? I have great reservations regarding this system and don't like that concerns weren't identified before it was introduced.

The concerns raised by this parent suggest that, in their quest to grade students on consistent standards, standards-based systems sometimes fail to address the needs of individual students, especially those that master course material quickly. Additionally, this parent was confused by the meaning of a “P” grade and felt that it did not communicate how students could improve, something that grades in a standard-based system are supposed to do easily.

As a counter to the “I Hate the Proficiency Scale” group, other Oregon students and teachers have formed an “I Love the Proficiency System!” Facebook group. The description for this group explains how the grades under the proficiency system are superior because they: 1) Give students/parents/teachers a detailed view of students' skills and abilities in each class; 2) Only represent what a student does and doesn't know, not how hard they tried; and 3) Refer to consistent performance standards used across an entire school district.⁹³

Though the “I Love the Proficiency System!” group suggests that there are many people who do support the standards-based grading system recently implemented in Oregon, it is notable that this group only has 33 members, while the “I Hate the Proficiency Scale” group has 1,094 members.⁹⁴ The anecdotal evidence supplied by these Facebook groups suggests that there is great disagreement over the effectiveness of Oregon's standards-based system. **The reaction to Oregon's standards-based grading system indicates that, as good as standards-based grading sounds in theory, it is still difficult both to implement such a system and to convince people of its worth.** While the backlash against Oregon's system could be ascribed merely to the fact that it is a new system that people are unfamiliar with, the amount of negative criticism makes it clear that there are real issues that schools hoping to implement a standards-based grading system should take into account.

⁹³ Ibid.

⁹⁴ Facebook. “I Hate the Proficiency Scale.” Op. cit.
Facebook. “I Love the Proficiency System!” Op. cit.

Research Findings

Some research has been conducted on the effects of different aspects of various grading systems on students, and this subsection reviews the results of a selection of previous studies.

One common grading practice that standards-based grading seeks to change is the use of grades as motivational tools. **In order to use grades to motivate students, it is necessary to incorporate behavioral factors into grades, a practice that standards-based grading stands firmly against.** Standards-based grading still seeks to motivate students, but through other means than grades used as either rewards or punishments. In contrast to this stance, skeptics of standards-based grading have questioned how a system that does not use grades as rewards and punishments could motivate students.⁹⁵

A 2004 study conducted by Susan Pedersen and Doug Williams with three 7th grade science classes revealed interesting results about how using grades as motivational tools impacts students. Two of the primary questions addressed in the study were: 1) In a student-centered learning environment, do students perform better on tasks they know they will be graded on? and 2) Do various assessments have different impacts on students' motivational orientation?⁹⁶ Pedersen and Williams collected data by comparing different assessment practices and conducting interviews.

Skeptics of standards-based grading have questioned how a system that does not use grades as rewards and punishments could motivate students.

The results of Pedersen and Williams' study indicated that students do perform better on assignments, specifically in-class worksheets, when they know they will be graded. However, **the study also suggested that the value of grading in-class assignments might be limited, as students who did not receive grades on in-class assignments performed as well on achievement assessments as those who did.**⁹⁷ In regard to whether different types of assignments affect student motivation differently, this study, when compared with a previous study, suggested that students in programs *without* grades experienced greater intrinsic motivation. Pedersen and Williams were hesitant to draw conclusions from these results, but they did state, "The discrepancies between the two studies indicate a need for a greater understanding of the role of grading in student-centered learning environments."⁹⁸

⁹⁵ The Teacher's Forum. Op. cit.

⁹⁶ Pedersen, S. Williams, D. 2004. "A Comparison of Assessment Practices and Their Effects on Learning and Motivation in a Student-Centered Learning Environment." *Journal of Educational Multimedia and Hypermedia*, 13:3, 283-306.

⁹⁷ Pedersen, S. Williams, D. Op. cit.

⁹⁸ Ibid.

The suggestion that students might be more motivated when they are not graded implies that a standards-based approach, with its de-emphasis on frequent graded assignments, could increase student motivation. While this interpretation of Pedersen and Williams' study is valid, it is important to note that their findings also revealed that there was not anything particularly damaging about grading assessments in a traditional way. Pedersen and Williams concluded that, as long as the learning environment was stimulating, grading and assessment had relatively little impact. They wrote, "In a stimulating environment, assessment may be of little importance to students. They take for granted that grading, the aspect of assessment that is most salient to them, is inevitable. They will do what is necessary to make good grades."⁹⁹ **Ultimately, Pedersen and Williams' study suggests that commentators sounding alarms over the evils of traditional grading practices might be missing the bigger issue – namely, how to provide students with a stimulating learning environment.**

Pedersen and Williams' inconclusive findings on the relationship between grading and motivation are supported by a meta-analysis of studies of how reinforcement and rewards affect intrinsic motivation, conducted by Judy Cameron and W. David Pierce. Cameron and Pierce analyzed 96 experimental studies that compared rewarded subjects to non-rewarded subjects on measures of intrinsic motivation.¹⁰⁰ This meta-analysis is helpful because traditional grading practices and standards-based grading practices take very different attitudes toward awards. **Because they often provide grades for non-academic achievement factors like homework completion, attendance, and participation, traditional grading practices can be characterized as systems of rewards. On the other hand, standards-based grading systems place much less importance on grades as rewards, instead emphasizing a few summative assignments as indicators of proficiency** (though, to be fair, the marks received on summative assignments are also rewards).

Keeping in mind how traditional grading practices and standards-based grading practices use rewards differently, Cameron and Pierce's meta-analysis provides perspective on how these different grading practices can affect student motivation. **The meta-analysis set out to answer concerns that reward systems have a negative impact on intrinsic motivation.** As explained by Cameron and Pierce:¹⁰¹

The contention is that reinforcement may decrease an individual's intrinsic motivation to engage in a particular activity. To illustrate, if a child who enjoys drawing pictures is externally reinforced (e.g. with points or money) for drawing, the child may come to draw less once the reward is discontinued.

⁹⁹ Ibid.

¹⁰⁰ Cameron, J. Pierce, D. 1994. "Reinforcement, Reward, and Intrinsic Motivation: A Meta-Analysis." *Review of Educational Research*, 64:3, 363-423.

¹⁰¹ Cameron, J. Pierce, D. Op. cit. 363.

In their investigation of this contention, Cameron and Pierce found that, overall, rewards (such as grades) do not decrease motivation.¹⁰² This finding indicates that a grading system based on rewards, as both traditional and standards-based systems ultimately represent, is not detrimental to students' motivation to learn. One interesting finding of Cameron and Pierce's meta-analysis was that there was a slight negative effect on motivation when rewards given simply for the completion of a task were removed.¹⁰³ **This finding suggests that giving rewards for a task like homework completion might have a negative effect on student motivation when the reward is removed.** If this is true, then a standards-based system, which would never provide rewards just for the completion of a task, could be better for student motivation.

The findings of both Pedersen and Williams' study and Cameron and Pierce's meta-analysis suggest that standards-based systems do not have a negative effect on student motivation, even though they place a reduced emphasis on grades as rewards.

Ultimately, Cameron and Pierce's meta-analysis suggests that, while there is no harm in using grades as rewards, **a system that uses rewards a little more sparingly and meaningfully, like standards-based grading, could be effective.** This suggestion stands directly in contrast to fears that not having grades as constant rewards would reduce student motivation. This being said, Cameron and Pierce's meta-analysis found that rewards just for the completion of tasks only had a "minimal" negative effect on motivation, hardly enough evidence to either condemn traditional grading practices or to advocate standards-based grading. Additionally, because this meta-analysis was not compiled exclusively through an analysis of studies of grading practices it is impossible to use it to make firm conclusions about grading practices.

The findings of both Pedersen and Williams' study and Cameron and Pierce's meta-analysis suggest that standards-based systems do not have a negative effect on student motivation, even though they place a reduced emphasis on grades as rewards. Unfortunately, the results of these two studies are too inconclusive to use to make any firm conclusions about the comparable effectiveness of traditional and standards-based grading systems.

¹⁰² Ibid. 363.

¹⁰³ Ibid. 363.

To make comparisons between traditional and standards-based grading systems, scientific research is needed on the direct effects and effectiveness of both standards-based and traditional grading practices. One such study is a 1997 survey of the standards-based changes brought by the Kentucky Instructional Reform Information System (KIRIS), which measured students' progress toward learning standards as defined by the Kentucky Education Reform Act. The survey compared teachers in "high-gain" and "low-gain" schools in reference to their implementation of standards-based practices in elementary and middle school mathematics and writing education. **The survey produced very inconclusive results, finding that "there were no consistent associations between specific teaching practices and biennial KIRIS gains."**¹⁰⁴ While there were some standards-based practices that were more prevalent in high-gain schools, these gains were also associated with traditional practices.¹⁰⁵ The results of the KIRIS study do suggest that standards-based practices could have promise as a grading system, but there is not enough evidence to claim that these new methods are either more effective or less effective than traditional grading practices.

In summation, standards-based grading is far from being a proven panacea to the problems of traditional grading systems, but has still garnered plenty of support from educators and academics.

Overall, much of the literature reviewed for this report is characterized by a lack of solid evidence either supporting or denying the effectiveness of standards-based grading practices. There is a wealth of anecdotal evidence and educational theory celebrating standards-based grading as the best grading practice, but, it must be noted, there is also plenty of skepticism from teachers, parents, and students who have been involved in such programs. In summation, standards-based grading is far from being a proven panacea to the problems of traditional grading systems, but has still garnered plenty of support from educators and academics.

¹⁰⁴ Cameron, J. Pierce, D. Op. cit. 85.

¹⁰⁵ Ibid. 85.

Section 3: Profiles of Standards-Based Grading Systems

There are a number of school districts across the United States that have implemented standards-based grading systems. In general, standards-based grading programs seem to be used more frequently in elementary schools, but there are some middle and high schools that have implemented such programs. This section profiles a few of the standards-based grading programs that have been employed by U.S. middle and high schools.

Aurora Public Schools, CO

Aurora Public Schools, located in Aurora, Colorado, implemented a standards-based grading system in elementary and middle schools in 2009 and in high schools in 2010.¹⁰⁶ The major purposes of Aurora Public Schools' standards-based grading system are:¹⁰⁷

- ❖ To communicate the achievement status of students to parents and others
- ❖ To provide information that students can use for self-evaluation
- ❖ To select, identify, or group students for certain educational paths or programs
- ❖ To provide incentives for students to learn
- ❖ To evaluate the effectiveness of instructional programs
- ❖ To provide evidence of students' lack of effort or inappropriate responsibility

The standards-based system implemented by Aurora Public Schools uses standards in 13 content areas: civics, dance, economics, foreign language, geography, history, mathematics, music, physical education, reading/writing, science, theatre, and visual arts.¹⁰⁸ Teachers in Aurora Public Schools grade students both on their academic performance in these content areas and on their work habits and behavior.¹⁰⁹ **By keeping proficiency measurements and work habit assessments separate, Aurora Public Schools supplies a model for how standards-based grading systems can still provide evaluations of student behavior without compromising grades as a measure of proficiency.** Below are the different marks used in the Aurora Public Schools standards-based system and their corresponding meanings as applied to the 13 content areas:¹¹⁰

¹⁰⁶ Aurora Public Schools. 2010. "Standards-Based Grading." <http://aurorak12.org/parents/sbg/>

¹⁰⁷ Aurora Public Schools. 2010. "Guiding Systems." <http://aurorak12.org/parents/sbg/guiding-principles/>

¹⁰⁸ Aurora Public Schools. 2010. "The History of Standards."

http://www.aps.k12.co.us/family/grading/history/index_files/frame.htm

¹⁰⁹ Aurora Public Schools. 2010. "High School Standards-Based Report Card 2010-2011."

http://www.aps.k12.co.us/family/grading/docs/hs_reportcard_draft.pdf

¹¹⁰ Ibid.

- ❖ A: Demonstrates a thorough understanding of the grade level content and consistently applies the benchmarks, and/or concepts, and/or processes/procedures in a variety of contexts
- ❖ B: Demonstrates understanding of the grade level content and applies the benchmarks, and/or concepts, and/or processes/procedures in a variety of contexts
- ❖ C: Demonstrates understanding and application of most of the benchmarks, and/or concepts, and/or processes/procedures of the grade level content; needs teacher support to demonstrate proficiency
- ❖ D: Demonstrates limited understanding and application of the benchmarks, and/or concepts, and/or processes/procedures of the grade level content; needs more instruction and/or practice to demonstrate proficiency
- ❖ R: Rarely demonstrates understanding and ineffectively applies benchmarks, and/or concepts, and/or processes/procedures of the grade level content
- ❖ I: Incomplete
- ❖ N: No Evidence
- ❖ S: Satisfactory for Pass/Fail courses
- ❖ U: Unsatisfactory for Pass/Fail Courses

In the Aurora Public Schools grading system, transcripts still appear the same, but refer only to students' progression toward proficiency standards as opposed to the combination of academic achievement, behavior, teacher expectations, and teacher character judgments seen in a traditional grading system.

Montgomery County Public Schools, MD

Montgomery County Public Schools, located in the Washington, DC metropolitan area, implemented a standards-based grading system for grades 1-12 in 2006. The Montgomery County program incorporates some aspects of traditional grading into its standards based system. Outlined below are the main characteristics of standards-based grading in Montgomery County:¹¹¹

- ❖ Teachers in grades 1-12 will base report card grades on academic achievement only. In grades 6-8, teachers will report information about effort separately from performance grades. In grades 9-12, teachers will *only* report performance grades.
- ❖ Grades will reflect what students know and can do in reference to specific grade-level standards and course expectations in different content areas.
- ❖ In high school, performance grades will be reported using A,B,C,D,E.

¹¹¹ Montgomery County Public Schools. 2006. "Grading and Reporting, Grades 1-12." <http://www.montgomeryschoolsmd.org/info/grading/documents/supporting/GradingProceduresOverviewAll08.pdf>

- ❖ Homework may count for up to 10 percent of a student’s grade. Full credit is given for homework that is turned in by the deadline.
- ❖ Reassessment opportunities are offered to students as long as they complete the original task, complete the required assignments, and complete the reteaching/relearning activities. These reassessment grades replace the original grades.
- ❖ Extra credit is not used.
- ❖ Final report cards show only academic performance grades.
- ❖ Standards-based grades can help teachers plan their instruction to challenge and support all students.

Montgomery County Public Schools’ standards-based grading system does not change the appearance of students’ report cards, but does seek to grade mainly on learning standards. Though homework completion grades are included, they can only count for up to 10 percent of a student’s grade. By allowing reassessment opportunities, the Montgomery County Public Schools’ system encourages students to progress toward learning standards.

Quakertown Community School District, PA

In 2004, the Quakertown Community School District implemented a standards-based grading program in elementary schools. This program was expanded to middle and high schools in 2009.¹¹² **Of the programs profiled, the standards-based program employed by the Quakertown Community School District hews the most closely to the main tenets of standards-based grading.**

The standards-based grading system at Quakertown Community School District is designed to increase student achievement through “a focus on students mastering defined learning targets instead of accumulating points.”¹¹³ In order to facilitate student progression toward learning targets, the program uses the following grading practices:¹¹⁴

- ❖ Students should be able to state which learning targets are being addressed by each assessment.
- ❖ Grades correlate to achievement of defined learning targets.
- ❖ It is mandatory that students are assessed on every learning target in the QCSD gradebook for each course.
- ❖ Students should be able to track their progress on each learning target at all times.

¹¹² Quakertown Community School District. “Standards-Based Grading.” <http://www.qcsd.org/213010222123447650/site/default.asp>

¹¹³ Quakertown Community School District. “The QCSD Standards-based Grading Playbook, High School.” 1. http://www.qcsd.org/213120814221643387/lib/213120814221643387/SBG_Playbook_-_Senior_High_School_Version_-_FINAL_8-2010.pdf

¹¹⁴ Ibid. 1

- ❖ Grades are based on individual, not group achievement.
- ❖ Checking for understanding should be used to inform instruction and remediation efforts. Assessment should be an ongoing process.
- ❖ Feedback includes written and oral comments intended to coach students on how to improve learning and achievement.
- ❖ Multiple opportunities are provided for demonstrating understanding through revision, alternative and/or subsequent assignments after receiving appropriate correctives. Students may need to meet defined conditions set by the teacher prior to being given additional opportunities to show understanding.
- ❖ All students have the opportunity to be reassessed, regardless of the current learning target performance level. Students may need to meet defined conditions set by the teacher prior to being given additional opportunities to show understanding. These requirements may include:
 - Completion of the original task or assessment
 - Completion of required assignments
 - Completion of the reteaching/relearning activities
- ❖ There is no penalty to a student for requiring additional time and instruction to learn. However, teachers may choose to define end points for both in order to accommodate grade and reporting periods.
- ❖ Achievement is reported separately from employability.
- ❖ All students have the opportunity to perform strategic thinking on a learning target, even if it requires remediation.
- ❖ Work that is turned in late will be assessed for achievement. Any penalty for a student's lack of preparation/timeliness may be reflected in an employability grade.
- ❖ If a student's progress toward a learning target is inconsistent or unclear, the teacher should collect more evidence in one of the following ways:
 - Develop different opportunities for the student to demonstrate understanding after providing correctives if necessary;
 - Discuss the assessment items to see why the student answered incorrectly;
 - Interview students using scaffolding questions to determine level of understanding.

These grading practices demonstrate a clear commitment both to assessing students only on academic performance and to helping them progress toward proficiency standards. In order to record student progress against proficiency standards, the Quakertown Community School District uses a scoring system of 1, 2, 3, 4. Table 4 outlines the standards students must achieve to receive different marks:

Table 4: Quakertown Community School District Scoring Rubric¹¹⁵

Score	Description
4	Using the most recent, comprehensive evidence requiring high levels of cognitive demand, the student exceeds learning target by performing at exemplary levels. Some examples of this include: <ul style="list-style-type: none"> ❖ Breaking content into its components ❖ Making connections ❖ Applying learning target to a new situation ❖ Offering alternative perspectives ❖ Employing other higher order thinking skills
3.5	Using the most recent, comprehensive evidence requiring high levels of cognitive demand, the student meets and sometimes exceeds learning target as exhibited in performances on basic application, strategic and extended thinking activities. A student who scores a 3.5 has sometimes shown exemplary performance on activities that require a high level of cognitive demand.
3	Using the most recent, comprehensive evidence requiring high levels of cognitive demand, the student meets the learning target as exhibited in performances on recall, basic application, strategic and extended thinking activities.
2.5	Using the most recent, comprehensive evidence requiring high levels of cognitive demand, the student almost meets learning targets as exhibited in performances on recall, basic application, strategic and extended thinking activities.
2	Using the most recent, comprehensive evidence requiring high levels of cognitive demand, the student is approaching an understanding of the learning target as exhibited in performances on recall, basic application, strategic and extended thinking activities.
1.5	Using the most recent, comprehensive evidence requiring high levels of cognitive demand, the student is beginning to develop necessary skills to meet the learning targets as exhibited in performances on recall, basic application, strategic and extended thinking activities.
1	Using the most recent, comprehensive evidence requiring high levels of cognitive demand, the student exhibits limited skills necessary to meet the learning targets as shown in performances on recall, basic application, strategic and extended thinking activities.
0.5	Using the most recent, comprehensive evidence requiring high levels of cognitive demand, the student does not exhibit necessary skills to meet the learning targets as shown in performances on recall, basic application, strategic and extended thinking activities.
0	NE/No evidence of learning toward the target was shown.

These number scores are converted into standard letter grades before they are displayed on a student's report card. A score of 3.51-4 results in an A, 3-3.5 in a B, 2.5-2.99 in a C, 2.0-2.49 in a D, 0-1.99 in an F, and "not enough evidence to report a grade" in an NE.¹¹⁶

¹¹⁵ Quakertown Community School District. "The QCSD Standards-based Grading Playbook, High School." Op. cit. 5.

¹¹⁶ Quakertown Community School District. "The QCSD Standards-based Grading Playbook, High School." Op. cit. 7.

Project Evaluation Form

Hanover Research is committed to providing a work product that meets or exceeds member expectations. In keeping with that goal, we would like to hear your opinions regarding our reports. Feedback is critically important and serves as the strongest mechanism by which we tailor our research to your organization. When you have had a chance to evaluate this report, please take a moment to fill out the following questionnaire.

<http://www.hanoverresearch.com/evaluation/index.php>

Note

This brief was written to fulfill the specific request of an individual member of Hanover Research. As such, it may not satisfy the needs of all members. We encourage any and all members who have additional questions about this topic – or any other – to contact us.

Caveat

The publisher and authors have used their best efforts in preparing this brief. The publisher and authors make no representations or warranties with respect to the accuracy or completeness of the contents of this brief and specifically disclaim any implied warranties of fitness for a particular purpose. There are no warranties which extend beyond the descriptions contained in this paragraph. No warranty may be created or extended by representatives of Hanover Research or its marketing materials. The accuracy and completeness of the information provided herein and the opinions stated herein are not guaranteed or warranted to produce any particular results, and the advice and strategies contained herein may not be suitable for every member. Neither the publisher nor the authors shall be liable for any loss of profit or any other commercial damages, including but not limited to special, incidental, consequential, or other damages. Moreover, Hanover Research is not engaged in rendering legal, accounting, or other professional services. Members requiring such services are advised to consult an appropriate professional.