

Governance Brief

Research-Supported Strategies to Improve the Accuracy and Fairness of Grades

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Background

This brief describes research-supported strategies that can help school districts improve the accuracy and fairness of their grading policies and practices. Grades can have an enormous impact on students' lives. They are often the most important factor in college admissions and therefore, key to the opportunities that come with earning a college degree. Both University of California and California State University determine admissions largely on the basis of grades. In addition, counselors use grades to recommend what courses students should and should not take in junior high and high school. It is essential, then, that local policies ensure that grading practices are as fair, accurate and consistent as possible.

Grades serve several purposes. They provide students with feedback on their learning, communicate to parents about students' academic achievement, inform teachers for instructional planning and certify that students have mastered the skills needed for the next level of learning. Grades can also motivate students to perform well.¹

In order to serve these purposes, grades must accurately reflect what students know. Research suggests that grading systems need to be "simple, stable, straightforward and easily understood." They also need to be "administered consistently, and result in predictable, fair and accurate assessments of student achievement." Grades that are "based on uneven standards applied in an uneven manner, cannot possibly fulfill the primary informative purposes of grading."²

Recommended grading practices

In California, we have an example of how grades can be inaccurate. Public college data indicate that grades do not always offer a realistic picture of students' content knowledge. The average grade point average (GPA) of students

who enter the CSU system is above a 3.0, a GPA that should indicate a strong grasp of high school subject matter. Yet, almost half (45 percent) of CSU freshmen need remediation in basic subjects, indicating that the grades of many students who enter CSU are not, in fact, an accurate reflection of their content knowledge in basic subjects like language and math.³

Researchers who study grading have uncovered practices that contribute to the inaccuracy of grades. They offer two principal recommendations designed to improve these practices and increase the accuracy, fairness and consistency of academic grading, particularly in the junior high and high school setting.

Recommendation 1: Assess non-academic factors separately

Academic grades should reflect only student mastery of academic content in order to reflect what students know about the subject matter that they must learn in order to succeed in progressively more rigorous classes. Although it is a common grading practice to combine academic and non-academic factors into a single grade, there is little research to indicate that some of the factors that are often included in academic grades provide an accurate reflection of students' academic achievement. Examples of non-academic factors that school communities often assess include classroom participation, effort, study habits and turning in assignments on time. Researchers propose that including such nonacademic factors can make academic grades *less accurate*.⁴

These researchers do not suggest ignoring nonacademic factors altogether. Families and schools often value certain nonacademic factors that may contribute to students' ability to learn and therefore, want to include them when reporting outcomes. However, researchers indicate that, while it may be important to provide an indication of student progress

with regard to these factors, it is equally important to report such factors separately from academic grades, in order to ensure that grades indicate the actual performance of students with regard to mastery of academic content.⁵

A meaningful alternative is to establish clear and separate criteria for such nonacademic factors and assign them a separate set of marks. The marks in such a system communicate to students and parents how students are doing, but are not part of the grade point average that is designed to indicate how well students have mastered content. Homework provides a concrete example. With marks on a 1-4 scale, 1 might indicate numerous missing assignments, 2 a few missing assignments, 3 only one or two missing and 4, that all homework was done and turned in on time.⁶

Many districts have adopted these recommended practices. Some have designed local report cards to include nonacademic student outcomes, often using performance level indicators (such as the homework example above) instead of letter grades to distinguish them from the academic marks. Examples include:

- » Plus (+) or minus (-)
- » Numeric scale
- » Descriptors, such as “satisfactory, needs improvement, and not satisfactory”

In other districts, completing homework assignments and participating in class are discussed with parents at conferences, but not recorded on report cards. Some school systems try to emphasize the value of these and other behaviors and use them as positive motivators by connecting them to other kinds of consequences. For example, some schools have used attendance or classroom behavior as criteria for extracurricular eligibility or honor roll status.

Nonacademic factors to consider including in a separate measure

Among the non-academic factors that schools can measure, some are associated with student success, although they are not direct indicators of students’ mastery of academic content.

Class Attendance: Maximizing learning time is highly correlated with student achievement, and it begins with coming to class. Chronic absenteeism — missing more than 10 percent of school days — is associated with lower academic achievement.⁷ In a 2008 study, the chances of graduating from high school on time

dropped to less than half for junior high students who were absent from school more than 10 school days per year.⁸ However, docking students’ academic grades for being absent can be unfair. Students cannot control being sick and often are not in control of their transportation or when families schedule vacations during the school year. It can also be inaccurate, because some students master academic content despite a poor attendance record.

Homework: While research on the benefits of homework in elementary school is mixed, there is evidence that some homework is correlated with greater academic achievement in high school.⁹ However, assigning homework and grading homework are separate decisions and researchers suggest that the latter practice may not contribute to an accurate understanding of what students know. Traditionally, teachers assign homework to provide students an opportunity to practice a skill that has been newly taught. By including performance on homework in the calculation of overall academic grades, teachers are not giving students enough learning time before holding them accountable for mastering content. Grading reform advocates suggest that homework not be graded, but instead be considered formative in nature, because its purpose is to practice a new skill or knowledge set, not to demonstrate mastery. Teachers can check that students are completing their homework — a work/study habit that can be included in a separate measure — and can look at homework to determine students’ understanding and need for additional instruction.

Homework Practices at McNally High School – Alberta, Canada

McNally’s homework policies tap into student motivation by giving them opportunities for autonomy, mastery and purpose. Homework is explicitly designed to provide students with practice. It is not graded and teachers let students decide if the practice the homework provides will help increase their understanding. However, if students fail the summative assessment (mid-term or final exams, for example), they must go back and finish all the previous formative assessment assignments — including homework — before they can retake the summative test to assess whether or not they have mastered the content.¹⁰

Behavior: Including student behavior in academic grades is not uncommon, but grading researchers maintain that behavior is “not a part of the evidence that reflects what students have learned and what they are able to do.” However, the reality is that student behavior often influences teachers’ grading practices. Research in elementary grades has shown that how teachers perceive students’ behavior, influences the academic grades students receive.¹¹ This suggests that directing teachers to record their perceptions of student behavior separately may help them to remove the influence of those perceptions in the calculation of academic grades.

Recommendation 2: Ensure academic grades reflect only final mastery of content

Another practice that researchers recommend for academic grades to reflect student mastery of academic content is to base grades on what students have learned by the end of a unit of study or course. They reason that students continue to learn the content after an early test or difficult assignment, and therefore, basing grades on assignments or tests before students have completed this learning provides an inaccurate picture of their level of mastery. Three practices are recommended to address this.

Use end-of-course assessments

Formative assessments are those used to track how well students are acquiring new skills and knowledge during the learning process. Examples of formative assessments might include pop quizzes, homework and chapter tests. They are used to provide feedback so both teachers and students understand what students have learned so far and where more instruction is needed. However, they do not reflect mastery of content by the end of the course. End-of-course-(summative) assessments, are designed to determine how well students have mastered content and skills after multiple opportunities to learn and practice. Basing grades on these summative assessments can better reflect students’ content knowledge. Examples of summative assessments include culminating projects, demonstrations, and end-of-course exams.¹²

Allow students to re-test

Students can perform poorly on assessments for a wide range of reasons. Grading researchers suggest that students should be allowed to retake summative assessments to demonstrate mastery, possibly using an alternate form of the assessment equivalent in nature and scope to the

original test. This could also be applied in cases of students’ poor performance in prior quarters. As students progress in the second or third quarter, they may gain greater understanding of content covered in the first quarter, that they did not initially understand.¹³ A good analogy is the smog test. If a car fails the test, the problem is addressed and then the car is retested.

Allow late work

Many high school teachers do not accept late work. However, turning assignments in late is not a matter of academic understanding. It is a behavioral concern, one that could be addressed in a separate measure of behavior as discussed above.¹⁴ Many educators stress the value of teaching students the importance of submitting work on time by imposing the penalty of a lower grade for submitting work after it is due. The logic is often based on the belief that low grades inspire students to work harder. However, research on student motivation indicates that this often has the opposite effect, discouraging students and decreasing motivation.¹⁵ The purpose of grading is to reflect the degree of academic achievement of the student by the end of the course. When the work is submitted (or the learning is achieved) is independent of the degree of understanding a student ultimately develops.

Grading Practices at Minnetonka High School

This high school in Minnetonka, Minnesota has been engaged in ongoing grading reform for several years. Some of the most significant changes in grading practice include that:

- » Grades are based principally on summative assessments.
- » Nonacademic factors (behavior, effort, etc.) are discussed with parents at conferences.
- » Rather than including attendance in grades, they have an aggressive absence intervention protocol.
- » Students must complete missing or late work during lunch or before school.

Although they cannot be tied solely or explicitly to changes in grading practice, student achievement, behavior and absences all improved after these grading reforms were introduced.¹⁶

What boards can do

With grades playing such a crucial role in students' lives, grading accuracy is of concern to boards of education. Through their authority to set policies, boards can establish a system of student accountability that is fair, consistent and accurate. Boards interested in exploring grading practices can begin with a few core questions.

- » How consistent is the grading in our schools? How much discretion do schools have in determining academic grading policy?
- » Do we have explicit grading policies that outline what should and should not be included in academic grades?
- » To what extent do teachers have discretion to decide whether or not to include nonacademic criteria in determining academic grades?
- » What is our policy regarding homework?
- » How do absences (excused or unexcused) and late/missing work impact grades?
- » How does student behavior impact grades?
- » Are students allowed to retake summative exams to improve their performance?

Conclusion

Academic grades are a gateway to college, and completing college is highly correlated with a range of positive life outcomes. Compared to students who did not finish high school, college graduates live longer, have a better chance of being employed, and earn 66 percent more income over their lifetimes. Better education also leads to lower involvement in crime. High school dropouts — only 20 percent of the general population — account for 75 percent of the state prison inmate population. Finally, those with higher levels of education are more likely to vote and to be civically engaged.¹⁷

Grading policy is one of the means through which governing boards can help improve student outcomes and fairness in their districts and counties. Working with the superintendent and the professional staff, boards have the power to convene conversations about grading, so that the board, staff, parents and students can collectively learn about what research says about effective grading practices and how grading policy can lead to better student outcomes. Through these conversations and better understanding of this issue, boards lead their counties and districts to improve grading policy in a way that better captures student knowledge while respecting the professional judgment of educators.

Additional CSBA Resources

The following are policies on grading that will come out concurrently with this brief:

- » BP 5121 - Grades/Evaluation of Student Achievement
- » AR 5121 - Grades/Evaluation Of Student Achievement

Endnotes

- 1 Carey, T. and Carfio, J. (2012). The Minimum Grading Controversy: Results of a Quantitative Study of Seven Years of Grading Data From an Urban High School. *Educational Researcher*, 41 (6), 201-208.
- 2 Ibid.
- 3 CSU Performance data. <http://bit.ly/2a7hwNG> Accessed on June 10, 2016.
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- 6 Ibid.
- 7 Pearson Research and Innovation Network (2016). Not Present, Not Learning: Tracking Chronic Absenteeism and Other Nonacademic Factors. Old Tappan, NJ: McClarty, K. <http://bit.ly/29CrqGS> Accessed on April 18, 2016
- 8 Silver, D., Saunders, M., and Zarate, E. (2008). What Factors Predict High School Graduation in the Los Angeles Unified School District. (Unpublished doctoral dissertation). UCLA, Los Angeles, CA
- 9 Dean, C., Hubbell, E., Pitler, H. and Stone, B. (2012). Classroom Instruction That Works: Research-Based Strategies for Increasing Student Achievement, 2nd Ed. Denver, CO: Mid-continent Research for Education and Learning.
- 10 Vatterott, C. (2011). Making Homework Central to Learning. *Educational Leadership*. 69 (3), 60-64.
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- 12 Marzano, R. and Heflebower, T. (2011). Grades That Show What Students Know. *Educational leadership*, 69 (3), 34-39.
- 13 Ibid.
- 14 Ibid.
- 15 Carey, T. and Carfio, J. (2012). The Minimum Grading Controversy: Results of a Quantitative Study of Seven Years of Grading Data From an Urban High School. *Educational Researcher*, 41 (6), 201-208.
- 16 Reeves, D.B. (2008). Leading Change/Improving Student Attendance. *Educational Leadership*, 65 (8), 90-91.
- 17 Moore, K.A. and Emig, (2014). Making the Grade: Assessing the Evidence for Integrated Student Supports. Chidrends. Available online at: <http://bit.ly/29FPY4t>

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