Grading to Improve Learning

Susan M. Brookhart

Previously titled Grading and Learning



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To Frank, my husband and best friend, for all his love and support.

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Part I

The Basics of Grading for Learning

1

All Students Can Learn

"Will this count for my grade?" an anxious student wants to know. Most students start school wanting to learn, but common educational practices, especially conventional grading, conspire to change students' attitudes as they go through school. By their later elementary school years, most students talk about grades more than they talk about learning, and this preoccupation continues through high school and beyond. As students progress through school, their dissatisfaction with and cynicism about grades increase and their belief in the fairness of grades declines (Evans & Engelberg, 1988), starting perhaps as early as 3rd grade (John Antonetti, personal communication). How did it come to this? What have we done?

The Foundation

The premise of this book is the implicit promise or commitment teachers make to their students: *In my class, in this school, all students can and will learn*. Students won't all learn the same things at the same level of proficiency or in the same amount of time, but if students are in school, they are there to learn something. It doesn't take much of a leap to get to the implied questions: So, did they learn? What did they learn, and how well?

Grades are imperfect, shorthand answers to these questions. Assignment grades are summaries of student performance on specific pieces of work. Report card grades are summaries of student performance over sets of work. These sets of work are usually intended to reflect learning goals derived from

state or provincial standards. This book will show how to produce grades—both for single assignments and for report cards—that effectively communicate students' achievement of these learning goals.

Of course, grades are not the only answers to these questions. Conferences with students and parents, narrative reports, and other communication methods can supplement grades. Given the number of students in the education system, however, some sort of efficient summary grade has seemed necessary, at least since the advent of the common school (S.G.B., 1840/1992). In almost every school system today, assigning grades is part of a teacher's job. So if you have to do it, you might as well do it well!

Two big ideas follow from this foundation. These ideas should undergird your grading decisions. School and district grading policies should be consistent with them. They are the principles on which all the recommendations in this book are based.

- 1. Grades should reflect student achievement of intended learning outcomes.
- 2. Grading policies should support and motivate student effort and learning.

Principle 1 addresses the implicit question "How well did students learn (on this assignment or during this reporting period)?" Principle 2 addresses the larger question of how to create the kind of atmosphere that supports learning. Grading policies that are intended to elicit student compliance are not conducive to the active pursuit of learning.

The current climate of standards-based reform forces these issues for us. Perhaps you, too, feel the pressure that other educators have reported from the large-scale student proficiency testing that has been one of the defining features of this reform (Au, 2007). On the face of it, it seems like the pressure of external accountability assessment would also ramp up the pressure for traditional scoring and grading practices in the classroom. Paradoxically, though, we can actually use the standards movement to advantage. Standards describe the objects of students' achievement—what they are to learn—more clearly than conventional grading categories (mathematics, English, music, and so on). This makes room for standards-based grading and other grading reforms that focus

on learning and achievement. What matters is not whether the grading practices are standards based or conventional, but whether they support learning.

How Not to Use Grades

This is a true story about what happens when grades are not about learning. I was fresh out of college and had not yet secured my first teaching position. So, like many of you, I did substitute teaching. Within my first month of subbing, I was assigned to cover four days for a high school social studies teacher. Because he knew he was going to be out, he had planned in advance, and we had a brief meeting the week before he left.

One of his classes was composed of 10 young men who attended vocational-technical school in the morning and came to the high school in the afternoon for their two required academic classes, English and social studies. According to this teacher, they "didn't want to be there," and he was afraid they would pose a discipline problem while he was gone. Therefore, he had given them a group presentation assignment, and my "lesson plan" was to listen to the groups' presentations, one each day, and grade them. The grades I gave would "stick," he said. By that he meant he would really use them in his report card grades. He hoped that this would motivate the students to behave themselves.

I had just completed an elementary teacher-preparation program and had a brand-new K–8 teaching certificate. I had almost no experience with managing high school students. And what was I given as my only instruction? Grade!

If you think this was a disaster waiting to happen, you're right. When I arrived on Monday, I found that three groups had done absolutely nothing and one student in the fourth group had prepared a few note cards to read to the class. The teacher had asked me to turn in grades to him, so I did. I gave Fs to the groups that did nothing and a B to the group that did something, even though it was pretty dismal. It was clear that the students really didn't care one way or the other.

But the feared discipline problems didn't materialize. The students and I mostly just talked. Back then, I felt I had probably wasted their time, that I should somehow have been able to teach them some social studies. I felt badly that I didn't have enough content knowledge to at least tell them something about their topics. Older and wiser now, I realize that in that context these students weren't really going to learn much anyway.

Why not? There were a lot of reasons, as you can probably tell, but the judgmental use of grades was a big contributor. First, grading in that class was about discipline and control. It was the teacher's "big stick." And in this case, it was to be wielded on 10 students who had a long history of being unsuccessful in their academic classes. Not only was this grading plan not about learning, but it sent the message to these students that their teacher didn't trust them (and he didn't). Second, I had been instructed to grade the presentations, but there were no criteria for them, no expectations except that they would fill a 50-minute period and be on certain topics. So the assignment dehumanized the students and disrespected the content at the same time. And group grades are a whole other issue in themselves (Brookhart, 2013b). See Chapter 4 for more about that.

Every time I think of this story, it makes me sad. But I am no longer powerless to do anything about it, as I was then. The grading principles and practices I share in this book are, basically, the opposite of everything in this story. They are designed to help readers be the antithesis of the teacher in this story. Ultimately, they are designed to make school learning better for those ten young men and other students like them.

Common Terminology

Before getting into specifics, it will be helpful to establish definitions for some common terms that will appear throughout this book.

Grade (or mark) is commonly used to mean both the mark on an individual assignment and the symbol (letter or number) or sometimes level (such as "proficient") on a report card (Taylor & Nolen, 2005). O'Connor (2009) uses grade to mean only the mark on a report card, and not the one on individual assignments. However, the dual usage is so common that perhaps the best way to handle it is to accept it and live with it. That is the approach I will take in this book. I will endeavor to be very clear about whether I am talking about individual assignment grades or report card grades.

Grades for individual assignments should reflect the achievement demonstrated in the work. Grades for report cards should reflect the achievement demonstrated in the body of work for that report period. I'll have a lot more to say about that throughout the book, but for now, just consider achievement part of the definition of grade.

Scores are numbers or ordered categories. Some individual assignments, most notably tests, receive scores that result from a scoring procedure. The scoring procedure should be defined. For example, on a test made up of multiple-choice, true/false, or matching items, a typical scoring procedure is to give one point for each correct answer. Tests that have multipoint problems or essay questions require clear scoring schemes that define how to allocate the points.

Validity means the degree to which grades or scores actually mean what you intend them to mean. In the case of grading, if you intend a report card grade to indicate achievement of a standard, the grade should do that—and not, for example, represent attendance, or how appealing a student's personality is, or something extraneous like that. In the case of a classroom unit test score, if you intend the test score to indicate the achievement of a science unit's learning goals, the score should do that—and not, for example, represent how beautiful the student's handwriting is, or how well the student could read very complicated passages in some of the questions.

Reliability is the level of confidence you have in the consistency or accuracy of a measure. So, for example, in the case of that test score, how close is the percentage correct to the real level of achievement "inside the kid's head," and how much is it influenced by the form of the questions, time of day, inaccuracies in the teacher's use of scoring procedures, and so on? There will always be some inconsistencies (errors) in measurement, but you want to keep them as small as possible.

Grading is only one kind of student assessment or evaluation. Both of these terms, assessment and evaluation, are broader in scope than grading. Evaluation means judgment or appraisal of the value or worth of something. All evaluative judgments, not just grades, should be based on high-quality evidence that is relevant to the particular kind of judgment you are making. Assessment is a general term that means any process for obtaining information.

Classes, schools, programs, textbooks, and materials are also commonly evaluated. In this book, we will follow the convention that if we are talking about appraisals of students, we will use the term *assessment*. If we are talking about appraisals of classes, schools, programs, textbooks, and materials, we will use the term *evaluation*.

Formative assessment means that students and teachers gather and use information about student progress toward the achievement of learning goals as the learning is taking place. Information from formative assessments helps both students and teachers with decisions and actions that improve learning. Summative assessment is assessment that is conducted after the learning has taken place to certify what has been learned. Grading is one form of summative assessment. Unlike formative assessment, in which students must participate, summative assessment is usually the teacher's responsibility.

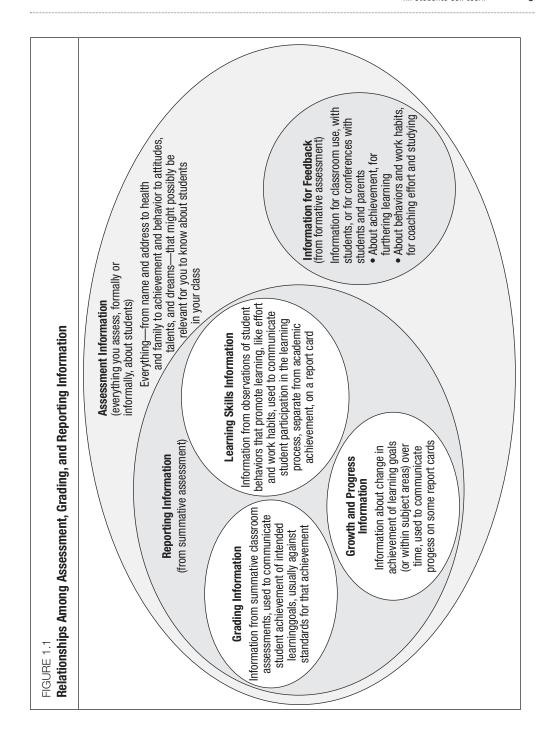
Student Assessment

Assessment information that is used for grading is only a subset of all the possible assessment information that is available for a student. Assessment information may be about student achievement, but it may also be about students' attitudes, effort, interests, preferences, attendance, behavior, and so on. All of this information is relevant for knowing your students, providing appropriate instruction, taking appropriate action with regard to student behavior, coaching students in their work, talking with them, and inspiring them. So when in this book we say that grades should be based on achievement information only, that does not imply that you should ignore the rest of the information you have about students.

Figure 1.1 presents a diagram of the relationships among all the different kinds of information a teacher gathers about students. Discussions of grading often refer to three of these categories: (1) assessment information (everything a teacher assesses about a student), (2) reporting information (only those measures and observations the teacher reports), and (3) grading information (only those measures and observations the teacher reports in a grade representing student achievement) (Frisbie & Waltman, 1992; O'Connor, 2009). Figure 1.1 completes the picture by adding the classroom-only information that the teacher uses formatively and does not report.

External Pressures on Grading Policies

Changing grading policies and practices is not simply a matter of deciding to do something different. Grading happens in a context. This context is somewhat different in each community but often includes pressures from parents



and community members and from higher education. These pressures tend to favor conventional, competitive grading practices that rank students. Changing grading policies and practices will require addressing these pressures.

Parent and Community Pressures. Parents and community members have definite expectations for grading policies and practices. However, some of these expectations may not be helpful and may present an opportunity for parent education. For example, even parents of young children seem to want schools to use letter grades and to provide information that compares their child to other students (Huntsinger & Jose, 2009). Yet normative grading—comparing students to one another—is harmful educationally (Ames & Archer, 1988; Dweck, 2000). Moreover, the information that Hannah does something better than Johnny and worse than Yolanda reveals nothing about what Hannah actually knows and can do.

In schools with traditional letter grading, parents sometimes misconstrue the meaning of the letters. The "average" letter grade that most teachers give is a *B*. However, most parents think the "average" grade is a *C* (Waltman & Frisbie, 1994). So parents whose children bring home *Cs* may think their student is average when, in fact, the student's grades are among the lowest in the class. Parents' ideas about grading can vary among different communities. In one study, Chinese American and European American parents of students in grades K–4 had different expectations. The Chinese American parents were, on average, less satisfied than the European American parents with the descriptive scales often used with younger children, such as "1 = consistently demonstrating, 2 = progressing, and 3 = requires additional attention" (Huntsinger & Jose, 2009, p. 404). Both groups wanted comparative information about their children. We know, however, that information about what individual students have actually accomplished is more helpful for teaching and learning.

The larger point here is that you should not assume that everyone shares one perspective on grades and their meaning. You can expect a diversity of perspectives, and you can expect that whatever the perspective, the person holding it thinks it is in the student's best interests. This book will make recommendations for how to communicate your grading policies to parents and how to give them different kinds of information without confounding the meaning of your grades.

Higher Education Pressures. At least at the high school level, teachers and principals perceive expectations for using grading practices that function well to rank students. College and university admissions directors prefer that high schools use grade-point averages based on weighted grades (Talley & Mohr, 1993). In workshop settings, I have often heard high school teachers state that they must give certain kinds of grades because colleges expect it. I have even heard middle school teachers say that they must give certain kinds of grades because parents want to be sure their children will be ready to gain admission to selective colleges and universities. To be honest, I think some of those teachers were copping out. ("I don't want to change my grading practices, and here's an excuse not to.") But some of them were expressing a real dilemma and real discomfort at confrontations with assertive parents. Some districts address this dilemma by using standards-based report cards in elementary and sometimes middle school; then in high school they use standardsbased grading practices with either traditional report cards or adapted versions of standards-based report cards that still yield grade-point averages.

Time for Self-Reflection

Take a moment to think about your own approach to grading, your own history with it, and in general where you're coming from when it comes to grades and grading. Everyone's grading background is a little different. In fact, my own grading background is part of what led me to write this book. So first, I ask that you give serious reflection time to the questions in Figure 1.2.

FIGURE 1.2

Self-Reflection Questions on Your Grading Background

Reflect on your personal experience with grading.

- Do you have a story from your own career as a student where grades play a prominent role? If so, tell that story. What did you learn from it?
- When you first became a teacher, did you feel prepared to "give grades" to students, either on individual assignments or on report cards? Describe your first efforts at grading and what you learned from them.
- 3. What are the main principles you use in your current grading practices? How have they been influenced by your previous experiences?
- 4. Are you satisfied with your current grading practices? Where do you want to focus your next steps in the development of your grading practices?

Now that you have answered these questions, I will share my personal reflections (see Figure 1.3). How is your story like mine? How is it different?

FIGURE 1.3

The Author's Personal Reflections on Grading

- Do you have a story from your own career as a student where grades play a prominent role? If so, tell that story. What did you learn from it?
 - As high school juniors, a girlfriend and I were tied in class rank. Senior year, she took a more difficult schedule than I did, and she learned more. But she got a B in a college-level biology course, so she slipped behind me in class rank. At the end of senior year, I got an academic prize that was based on class rank. I felt like a fraud. My senior year "coasting" had resulted in grades that made me look smarter than my friend, and it wasn't true. At the time, I just felt bad. With hindsight, I believe that was a pathetic lesson to have taught two excellent students.
- When you first became a teacher, did you feel prepared to "give grades" to students, either on individual assignments or on report cards? Describe your first efforts at grading and what you learned from them.
 - My teaching career began with a half year of daily substituting. Then I accepted a position in a 3rd grade classroom when the teacher left at the December break. Three reading groups were already in place, and the gradebook was already set up, including places for "oral reading" grades. So there I sat, with a group of seven students taking turns reading out loud to me while the rest of the class was doing seatwork. I had no criteria, no grading scale (what should I put? A? 100? 4?), and no experience with grading oral reading. Each reading group, and each student in each group, read something different. I just "made it up." I put 100 for readers whose work I liked, and 90, 80, and 70 for lesser performances, although I could not have told you in any given case why I came up with the scores I did. Again, I felt like a fraud.
- 3. What are the main principles you use in your current grading practices? How have they been influenced by your previous experiences?

 Influenced by the experiences I have already recounted and others like them, I read research on grading and did some research on the subject myself. I have become thoroughly convinced that no grading system will ever be perfect but that, on balance, grading on achievement is the best policy. It solves many grading problems, and it is defensible educationally. Grading on achievement gives students information about what they know and can do, and it supports students' self-regulation and feelings of control over their learning.
- 4. Are you satisfied with your current grading practices? Where do you want to focus your next steps in the development of your grading practices?
 - I feel like I have arrived at the right principles (grading on achievement and grading to motivate learning). Like most people, I always need practice at making this happen for every student, all the time.

Summary

The big ideas in this chapter are that grades should be based on achievement and that grades should support student motivation and learning. These two big ideas form the foundation for the rest of this book and all the principles and examples in it. This chapter began with a bad example of a class in which these principles were *not* followed. I hope the story illustrated the big ideas "in the breach." The chapter then reviewed some terminology and briefly discussed some external pressures that affect the context of grading. Finally, I hope the reflection you just did helped you identify any internal grading pressures that exist for you. With all this as preparation, Chapter 2 presents a more systematic statement of the rationale for learning-focused grading, beyond the stories and anecdotes in this chapter. There is quite a bit of evidence to support these big ideas about grading, learning, and motivation.

2

Grading on Standards for Achievement

Grading on standards for achievement means a shift from thinking that grades are what students *earn* to thinking that grades show what students *learn*. Teachers sometimes talk about grades as pay students earn by doing their work. This seems fine as a simple image. After all, doing assignments, studying, and paying attention are the work students do when they're in school. But if "earning" grades gives people the idea that grades are students' pay for punching a clock, for showing up and being busy, and for following directions no matter what the outcome, then the image is harmful. The object of all this busy-ness isn't just the doing of it. The idea is that once students do all these things, they will learn something.

One time when I was conducting a district workshop on grading, a young teacher became agitated. Everything her students did "counted," she said. Everything! That was what they were in school for, and that was how she kept them in line. If behavior and work habits didn't count toward grades, her classroom would fall apart. It would be easy to mock this teacher, but maybe we can learn something valuable from her. I think she really believed what she was saying and genuinely could not imagine coping with her classroom, much less being "successful" (according to her own judgment), without the heavy-handed grading policy she described. In fact, her resistance to my ideas might have been rooted in a fear that she really wasn't a good teacher yet, and she might have realized deep down that being an "enforcer" wasn't a very educative teaching style.

For grading to support learning, grades should reflect student achievement of intended learning outcomes. In schools today, these learning outcomes are usually stated as standards for achievement. Grades on both individual assessments and report cards should reflect students' achievement of performance standards on intended learning outcomes. It has to be both, because if grades on individual assessments don't reflect achievement of intended learning outcomes, the report card grade derived from them can't, either. The report card grade is a summary of the meaning of a set of individual grades. And for any of this to work, students have to understand what it is they are trying to learn and what the criteria for success on these learning targets are (Moss & Brookhart, 2012). It will do no good to base grades on achievement if students don't understand what it is they are supposed to be achieving.

Before we go any further down this road, stop a minute and reflect on what you think about this principle. Probably most of you reading this book do not have quite as extreme a view about "grading everything" as my agitated teacher did. However, many of you may genuinely think students should be graded for practice work, effort, and perhaps even attitude and can explain why you think so. Although I do not hold this view, I acknowledge that if behavior, effort, and attitude are not included in the grade, they have to be assessed and handled in some other way. Please take a moment to ask yourself the reflection questions in Figure 2.1.

Why Is It Important to Grade on Standards for Achievement?

This story shows how a well-meaning teacher who cares about her students and their grades ultimately missed the point on grading.

Ms. Davis was a teacher in a self-contained 4th grade classroom. Like many other teachers in her building, Ms. Davis believed students earned their grades by doing their work, which included things like showing a good attitude toward school, participating in classroom life, and trying hard. Courtney and her friend Aaliyah loved Ms. Davis's class. They enjoyed the family feeling, and they would do anything Ms. Davis asked.

This enthusiastic participation extended to their academic work, as well. Courtney and Aaliyah always completed their work when asked, tried hard, and behaved well during lessons. They raised their hands and spoke during class discussions. The quality of their work and their understanding in reading and language arts were good,

FIGURE 2.1

Self-Reflection Questions on Your Current Grading Practices

Reflect on your current grading beliefs and practices. If you teach more than one grade or subject, think about them one at a time as you contemplate these questions. For each question, try to figure out the rationale behind your answer. Why do you think or grade in the manner you describe for each question?

For individual assignment grades:

- 1. What symbol(s) do you use for grades (A, B, C, D, F rubric levels, percents, other)?
- What meaning do you intend those symbols to carry (achievement, effort, improvement, comparison to other students' work, other)?
- 3. How do you grade if work is late? Sloppy? Missing?
- 4. What do you do if the work falls on the borderline between two grade categories?

For report card (summary) grades:

- What symbol(s) do you use for grades (A, B, C, D, F performance standard levels, percents, other)?
- 2. What meaning do you intend those symbols to carry (achievement, effort, improvement, comparison to other students' levels, other)?
- 3. What elements do you include in your report card grades, and in what proportions (tests, quizzes, projects, papers, homework, effort, ability, participation, improvement, attitude, behavior, other)?
- 4. What method do you use to combine these assessments into a summary grade for the report card?
- 5. What do you do if the student's summary grade falls on the borderline between two grade categories?

but in mathematics—not so much. However, because they were such sweet students, their report cards carried A grades for all three subjects. In mathematics, Ms. Davis made sure there were ways for Courtney and Aaliyah to earn extra points. For example, they could do simple bonus questions or help with the mathematics bulletin board.

Courtney's and Aaliyah's parents saw these As and thought the grades meant that their daughters understood their mathematics as well as they did their reading and language arts. Sadly, so did Courtney and Aaliyah. They didn't realize they had been "cut a break." They thought they were doing and learning what was important to do and learn in mathematics. Imagine everyone's surprise when the state test results indicated they were both "below basic" in mathematics at the end of 4th grade. Imagine the special disappointment of the two little girls, who really thought they were learning. They had trusted their teacher to teach them and had interpreted their As as evidence that they had learned. Along the way, they had missed many learning opportunities

because they thought all was well. Instead of earning bonus points, Courtney and Aaliyah could have been practicing specific concepts and skills. But they didn't know.

Unfortunately, stories like this are all too common. If such missed learning opportunities continue for several years, students end up far enough behind that they cannot recover (Sanders, 1998).

Research Support. The recommendation to grade on standards of achievement only, separating assessment of effort, improvement, and behavior into a separate appraisal, is the current mainstream recommendation. It is not the mainstream practice yet, because it takes a lot of time to change practice. In fact, that is part of the reason I wrote this book—to help people who would like to move to grading on standards of achievement. Many grading authors recommend achievement-based grading (Guskey & Bailey, 2001; Marzano, 2010; O'Connor, 2009, 2011; Scriffiny, 2008; Wiggins & McTighe, 2006; Winger, 2005, 2009), as have I in my previous writing on the subject (Brookhart, 2004, 2009a, 2013a). Achievement-based grading follows logically and reasonably from what we know about successful teaching and learning.

Achievement-based grading brings up an interesting question. If a district claims that curriculum and instruction are aligned with state standards and the district uses a standards-based grading system, it makes sense that students' proficiency according to teacher-assigned report card grades should be related to their proficiency according to state test results. Is it?

There is evidence that traditional grades and state test results are only moderately related (Brennan, Kim, Wenz-Gross, & Siperstein, 2001; Conley, 2000). The inclusion of nonachievement factors in grades is usually offered as the reason for this lack of congruence between grades and external measures of achievement (Brennan et al., 2001), and there is research evidence to support that reasoning (Brookhart, 1993, 1994; Willingham, Pollack, & Lewis, 2002).

D'Agostino and Welsh (2007; Welsh & D'Agostino, 2009) investigated the question of whether achievement-only, standards-based grading yields accurate information about students in terms of their performance on state tests. What they found lends strong support to the use of a range of recommended grading practices, but most especially (a) being performance focused, defined as measuring standards of achievement rather than effort, and (b)

assessing the full range of the performance objectives under a standard, not just some of them.

In the district they studied, D'Agostino and Welsh (2007) found that the overall agreement rate between 3rd and 5th graders' standards-based grades and their proficiency levels on the Arizona Instrument to Measure Standards (AIMS, the Arizona state test at the time) were only moderate: 44 percent for mathematics, 53 percent for reading, and 51 percent for writing. When corrected for chance agreement, those percentages fell even lower (16 percent to 26 percent). However, when the researchers looked at these statistics for individual classrooms, they found wide variation. In some classrooms, the convergence between graded and tested standards-based performance was much greater than in others.

To see whether grading practices were related to how well teachers' judgments matched student proficiency levels, the researchers coded information from interviews of each teacher according to whether the following recommended grading practices were "clearly evident," "somewhat evident," or "not evident" (Welsh & D'Agostino, 2009, p. 85):

- Assessing most of the performance objectives in state standards
- Grading on achievement, not effort
- Creating or obtaining assessments focused on state standards
- Identifying the objectives assessed by each assessment and tracking students' performance skill by skill
 - Focusing on attainment of standards, not objectives listed in textbooks
 - Using end-of-unit assessments for grading, not practice work
 - Focusing on achievement, not progress (improvement)
 - Assessing frequently
- Using multiple assessment approaches to measure different aspects of a skill
- Using a clear method for converting individual assessment results to standards-based grades

Interestingly, they found that this list of attributes scaled nicely into an "appraisal style" score and that the two heaviest contributors to the score were, as mentioned, basing grades on achievement (performance quality) rather than

effort and assessing the full range of objectives (knowledge and skills) in each standard. And even more interesting, the higher the appraisal-style score—that is, the more a teacher's grading practices followed these recommendations—the more closely that teacher's grades agreed with his or her students' tested proficiency levels.

This study is the only one I know of that has tried to answer the question of whether grading practices make a difference in the quality of information on standards-based report cards. It was based on two years of data for two grades in one district in Arizona, and I hope soon to see other studies of this kind. For now, though, this study helps move the recommended grading practices one step further down the "research-based" road. Grading-practice recommendations—for example, to grade on achievement and not effort—are based in theory and research from the fields of educational psychology and measurement. As such they are research-based principles. This study gives us a direct test of the application of those principles in practice.

More generally, recent research suggests that we should not expect graded achievement and tested achievement to be the same thing (Brookhart, 2015; Brookhart et al., 2016). For a century, researchers have been studying the relationship between graded and tested achievement, almost always finding that the correlation between them is in the .5 range (Brookhart et al., 2016). This means that 25 percent of the variation in grades is due to whatever standardized tests measure and the remaining 75 percent is something else (or vice versa: 25 percent of the variation in tests is due to whatever grades measure). Previous generations of researchers have used this disparity to critique teachers' grading practices, sometimes quite harshly (for example, Carter [1952] titled his study "How Invalid Are Marks Assigned by Teachers?").

It is true that many grading practices do not communicate clearly about students' learning, and that is the main reason I am writing this book. But it is not true that better grading practices will ever lead to grades that are basically redundant to scores on standardized assessments. My colleagues and I have looked closely at the results of studies of grades from the last century (Brookhart et al., 2016) and have found that grades represent both the cognitive knowledge measured by standardized test scores and, to a smaller extent, noncognitive factors such as substantive engagement, persistence, and positive

school behaviors that teachers value. Perhaps even more interesting, there is evidence that the nature of the "achievement" measured by grades is different from the "achievement" measured by standardized assessments. The school achievement measured by grades is based on what students know and can do in light of a specific taught and learned curriculum, whereas the tested achievement measured by standardized assessments is more decontextualized. Context matters.

In this book, the recommendation to grade on achievement only is *not* a recommendation to grade using only tests, or to define "achievement" to mean the kinds of knowledge and skills that are currently tapped by large-scale, standardized assessments. It *is* a recommendation to base academic grades on evidence of student learning of intended standards and curricular goals, not the effort and behaviors students exhibited in their pursuit of those standards and goals. Even in classes where that is done masterfully, grades and standardized assessments will not correlate 100 percent.

Benefits for Teaching and Learning. It is important to evaluate what we value, and students want to do what counts. Grading on achievement says we value learning. It reinforces the commitment about learning we make to students and parents.

If grades are based on achievement, students and teachers can use the information better than if the grades represent a mixture of learning and other factors. Teachers can use achievement-based grades as indicators of the success of their instruction and as information to help them plan next steps in instruction for individual students, groups of students, or whole classes. Students can use achievement-based grades to self-assess and to set goals. A high school student could, for example, decide to spend more time studying for tests in a certain class. An elementary student might realize she needs help in a certain area and ask for it. These student uses hint at another benefit of grading on achievement: supporting student motivation to learn.

Grading on achievement, with a coherent system of instruction and formative assessment deeply aligned with the criteria for achievement, can lead to students developing a deeper and more self-regulated sense of responsibility than the use of grades as external rewards and punishments for behaviors. When students understand that it is their achievement against standards that is

graded, most of them will respond by developing the self-regulation and study skills necessary to achieve.

Basing grades on achievement doesn't mean we don't care about students' behavior, attendance, ability to meet assignment deadlines, degree of effort, and so on. Of course we do! All of these factors have a direct effect on learning, and it is in this light that we should interpret them to students. Developing good habits in all of these areas will help students be the best learners they can be.

For the most part, handle behavior and "academic enablers" (McMillan, 2001, p. 25)—which includes learning skills such as work habits, effort, homework, and so on—by coaching, not reporting. Use informal assessment to monitor these skills day by day. Give students ongoing formative feedback about these behaviors and suggestions for how to adjust them. Ultimately, study skills, classroom citizenship, and other learning-enabling skills can be reported using a separate indicator system on standards-based report cards. But they do not belong in the proficiency scales or in the letter grades that indicate achievement.

I hope that by this point I have demonstrated that grading on achievement is the main principle by which we keep our commitment to students: In my class, in this school, all students can and will learn. We have to make clear to students what they are learning and how well. We have to give them grades based on their achievement.

Content and Performance Standards

If we agree to base grades on achievement, the next question is "Achievement of what?" The usual answer in this day and age is achievement of state or provincial standards. In the United States, all 50 states and the District of Columbia have state standards. Most states organize these into content standards and performance standards. Content standards are statements of what students should know and be able to do. Content standards are usually organized by subject (for example, reading, mathematics, science) and by grade level. Performance standards are statements about how well students are supposed to know and be able to do what the content standards list.

Performance standards are defined differently in each state. For performance overall, each state defines three, four, or five levels of performance. The names of these levels vary slightly from state to state. For example, Pennsylvania uses four levels: below basic, basic, proficient, and advanced. Each performance level is associated with a cut score on the state test (that is, the minimum score a student must attain to qualify for the level) and should also be associated with a performance-level descriptor (that is, a statement of what the level means) (Perie, 2008).

Each state's set of standards is different. Standards differ in grain size (level of detail). Some states' standards are very general; others are very specific. Some states have general standards with more specific "strands" or subdivisions of content and skills under the standards. At the most general level, states' standards are more similar than different, with the exception that in many states students are expected to understand the history, geography and environment, and economics of their own state.

On June 2, 2010, the National Governors Association Center for Best Practices and the Council of Chief State School Officers released a set of state-led education standards called the Common Core State Standards in English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects and Common Core State Standards for Mathematics. (The text of these standards is available at http://corestandards.org.) Many states have adopted them as their state standards in English language arts and mathematics, as is or with some modifications. Some states have kept their own standards in these subjects. States also, of course, have state standards in other subjects like science, social studies, world languages, physical education, and the arts.

Professional disciplinary organizations—such as the National Council of Teachers of Mathematics, National Council of Teachers of English, National Council for the Social Studies, National Academy of Sciences, National Science Teachers Association, and Teachers of English to Speakers of Other Languages—are also excellent sources of information about what students should know and be able to do. In fact, the disciplinary organizations were at the forefront of standards development.

For me, the takeaway point from all these standards is that states and national organizations have given thought to organizing and presenting a description of the learning students can be expected to accomplish during their schooling. In some ways, it is a description of the promise: standards describe what all students can learn. And while the formulation of standards in your state is the one to which you and your students will be held accountable, the other formulations have good ideas about what that learning means, too. You may get some good ideas from looking at several sets of standards in the content area you teach.

Curriculum Goals and Intended Learning Goals for Classroom Instruction

The "standards" on which you grade achievement for individual assignments and for report cards are not exactly the state or Common Core standards discussed in the previous section. The standards on which you grade students are your actual expectations for their learning for that assignment or that report period. They are usually narrower in scope than state standards, which are typically broad. Expectations for student learning are derived from state standards and then translated or subdivided into curriculum goals and then into intended learning goals for classroom instruction. This is a distinction some people have a hard time making, probably because the word *standards* is used for both state standards and curriculum and classroom learning goals.

A state's annual state test is aligned to the state standards, but that state test is intended to be a general summary of learning over the course of at least a year. Any one standard is usually covered by just a few test items, and the scores reported for accountability purposes are aggregated across all standards to report proficiency levels in subjects (for example, mathematics, reading/language arts, science). And although one of the points of being "standards-based" is alignment, which means that the same standards are the basis of planning, instruction, assessment, and ultimately achievement, it is important to know that the curricular standards and learning goals for classroom lessons are not state standards per se but derived from them.

It is common to derive classroom unit goals and lesson objectives by reducing the grain size (that is, increasing the specificity) of concepts and skills so they are appropriate for lessons and units of instruction. Then, the teacher-oriented objectives are put into a form students can use as the learning targets they aim for in each lesson.

This process should not change the ultimate goals for learning. For training-style objectives (those that involve a very specific performance), state the specific learning outcome, even if you use the same language as the standard. For example, an outcome might be "Adds two-digit whole numbers." This statement is derived from the Common Core mathematics standard 2.NBT.6, "Add up to four two-digit numbers using strategies based on place value and properties of operations" (Common Core State Standards Initiative, 2010, Mathematics, p. 19).

Most learning outcomes are not that specific, however, and they focus on understanding terms and concepts in such a way that they can be applied both to tasks similar to those in which the concepts were learned and to tasks beyond that. You will hear such learning outcomes described variously as requiring "higher-order thinking skills" or "21st century skills" or "deep knowledge." For this kind of learning outcome, deriving learning goals for instruction and assessment requires two steps. First, state the general standard clearly; then specify what sorts of performances—among many that you could choose—will be evidence of mastery of that standard (Gronlund & Brookhart, 2009).

For example, a standard might be that students can comprehend literal information from informational text and use it to make inferences (Common Core Standard ELA, Reading Standards for Informational Text K–5, grade 4, #1: "Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text") (Common Core State Standards Initiative, 2010, ELA, p. 14). How will you know when students can do this? State the general standard first, and then list performances that clarify it. Assess these performances, but realize they are a sample of all the possible performances students could do to show you they can recount literal information and use it to make inferences.

Your grades on individual assignments, then, are a sample of scores from a larger, potential, unmeasured set of performances. So you might have something like the following list of performances for the general standard:

1. Students comprehend literal information from informational text and use it to make inferences.

- 1.1 Students recount the details from a passage of informational text. (This performance description could be further limited by specifying a grade level and/or specific kind of text—for example, 4th grade social studies textbook, newspaper article, or cookbook and craft directions.)
- 1.2 Students summarize information by giving the main point and supporting details.
- 1.3 Students draw conclusions about what interests and skills successful readers of the text might need.
- 1.4 Students compare and contrast information from this passage with information from other passages they have read.
- 1.5 Students draw pictures depicting details from the informational text.
- 1.6 Students explain to other students what they learned from reading the text.
- 1.7 Students make or do something based on information from the text.

This planning procedure makes clear that the instructional objective is comprehension and not *recounting, summarizing, drawing conclusions, comparing and contrasting, drawing, explaining,* or *making something.* This list is simply a *sample of the types of performance that represent comprehension.* A different sample of specific types of performance could serve equally well.

Building a System for Grading That Supports Learning

To build a system for grading that supports learning, all the elements in the system need to work together. The system is bigger than just your grading policies. You must clearly articulate what your learning outcomes are and how well students need to attain them in order to be considered proficient (or to reach an acceptable level of mastery in whatever reporting system you use). You must also be able to say how your classroom learning outcomes map onto both the larger curricular standards that are graded on the report card and the still-larger state standards that are tested annually. Building a system like this is important for instruction and for curricular coherence as well as for grading. Only after

you can describe what you will expect students to know or do can you start defining the assessments that will enable you to find out if they know and can do it. This sounds obvious, but in the heat of practice, teachers often skip this step. They sometimes go for a fun project because it sounds like fun, without first checking to see if it deeply matches the intended learning of content, thinking skills, and other discipline-related skills (for example, writing like a scientist). So it's important to say this: each assessment (or assessed project or assignment) needs definitions for each performance level, and these need to be communicated to students before they begin work. Unless students are *aiming* for something, it's not a target.

Only when standards, instruction, practice and formative assessments, and individual graded (summative) assessments are aligned can you begin to consider your grading system standards based. No amount of standards-based grading recommendations (clarify performance levels, grade on achievement, and so on) can make a system standards based if the original evidence of achievement is not soundly standards-based work.

When you are sure the building blocks of the system are in place—that individual pieces of graded work are standards based—you'll need to use strategies that make the next layer of the system standards based as well. You'll need a recording method that can keep track of students' performance on individual skills, or at least on the standards as articulated on the report card. You'll need to use methods to combine individual grades to reflect the achievement status a student ultimately reaches on each standard. And of course you'll need reporting methods that allow you to express this information in a clear, meaningful report card (Guskey & Bailey, 2001, 2010).

How Can I Grade on Standards If My School Doesn't Use "Standards-Based" Report Cards? If standards-based grading is not the reality where you are at the moment, don't despair. You can still do a good job of applying grading principles that support student learning. If you are a teacher in a district with conventional report cards, you can still use the two grading principles that honor the commitment to learning: (1) assign grades that reflect student achievement of intended learning outcomes, and (2) adopt grading policies that support and motivate student effort and learning. You can do this by

clearly communicating your "standards" (in the sense of expectations for work quality) to students and grading on that basis.

In a traditional grading context, for example, you might be required to report subject grades (English, mathematics, and so on) with a letter scale (*A*, *B*, *C*, *D*, *F*). Make clear for each assignment what the learning target is and how the assignment will allow students to show that particular knowledge or skill set. Have students look at some examples of good work if possible. Make sure students know what practice opportunities they will have and what formative assessment opportunities you will provide so that they can gauge where they are and how they need to improve before submitting work for grading or taking a test.

Then, even though you will have to summarize assessments of several different standards into one overall subject grade, at least you and the students will know exactly what the grade means, because all of you will be able to describe the set of knowledge and skill demonstrations on which it is based. Make sure the proportions you use to combine the different individual assessments into a final grade are the same proportions you used for your instructional emphases and that students know what they are. In doing this, you are taking care of Principle 1—that grades should reflect student achievement of intended learning outcomes—within the traditional grading context.

You can also stay true to Principle 2—that grading policies should support and motivate student effort and learning—within a traditional grading context. The idea of using formative assessment for practice work and not taking a summative grade until students have had an opportunity to learn the knowledge and skills for which you are holding them accountable can be applied directly in your classroom assessments in a traditional grading context. That is the most important and powerful of the strategies that support and motivate student effort and learning. If grades are not what you "give" but what students accomplish, then—as one teacher I know puts it—students "know what they need to do" to get the grades they desire.

Many high schools that want to adopt standards-based grading follow the very approaches just described. They don't change their report cards, or don't change them much (perhaps adding in a work-habits scale for each class), in order to maintain the possibility of conventional grade-point averages for college admissions and other purposes. But they do make sure that the grades reflect achievement, and they adopt grading policies that support student motivation and achievement.

Summary

One big idea in this chapter is that the use of standards-based or, more generally, learning-focused grading is supported by a multitude of evidence and potential benefits. Another is that the standards in state or national documents are often of a larger grain size than the standards for instruction, assessment, and grading. This means that districts and teachers must take steps to ensure that their curriculum, instruction, and grading are all aligned to state standards. The third big idea in this chapter is that even in a traditional grading context, learning-focused grading is not only possible but recommended.

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