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Assessment, Grading, and Differentiation

> Most kids never talk about it, but a lot of the time, bad grades make them feel dumb, and almost all the time it's not true. And good grades can make other kids think that they're better, and that's not true either. And then all the kids start competing and comparing. . . . And the people who are supposed to help kids, they don't. They just add more pressure and keep making up more and more tests.
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> —Andrew Clements, *The Report Card*

At the beginning of my (Carol's) third year of teaching, a very quiet, and evidently very courageous, small boy whispered something to me in the hall during the class change on the sixth day of school. His barely articulated words were lost in the chatter and energy of several hundred students moving from second period to third. After several failed attempts to have him speak louder and for me to listen "harder," I heard what he was saying. I thought he was asking me to help him open his locker—a predictable request for 7th graders who were new to lockers and middle school. What he was saying to me, however, reflected a need far more profound and challenging for both of us. What he whispered to the very tall lady he had never seen before was this: "I can't read." He was 15 and, as I learned from his crumpled class schedule, he was about to join my 7th grade language arts class composed of thirty-five 12-year-olds. He had missed the first week of school. He could not yet write the entire alphabet.

A herd of questions trampled through my brain. How did he get this far if he can't read? (*Irrelevant question. He's mine.*) How do you teach reading? (*Also irrelevant. No time for a course right now. Figure it out.*) Do I let the other kids know he has a special need or do I try to disguise it? (*How do I help a 15-year-old nonreader feel a sense of belonging and dignity in a 7th grade class that's based on reading?*) How do I find time to teach him? (*What happens if I quit paying attention to the other 34 kids in order to work with him?*) Where do I seat him in the room? (*Next to a good reader who can help him? Near my desk so I can get to him quickly?*) What materials do I use to help him learn to read? (*Nearly everything in our classroom is written at approximately grade level.*)

The questions that came to me from nowhere and in an instant are the baseline questions of what we now call differentiated instruction. For the next 18 years that I continued to teach in public school, I spent much of the time trying to find the best possible answers to those questions. Since then, I've spent my "second life" as a university teacher continuing to answer them with my colleagues and with teachers in classrooms across the world.

The boy's name was Golden. He provided me with a golden moment as a teacher. He made it impossible for me not to deal with the reality of student learning differences that were already quite evident to me before he arrived in my world. I understood the trust he had placed in me with his whispered confession. Now it was no longer possible for me to look past the range of needs in my classroom. Because of him, I had to figure out how to proactively deal with them. I didn't get a lot of sleep that year, but I became a much better teacher; and during all the years that followed, I was a much better steward of what my students brought to school with them.

By year's end, Golden was reading at a solid 3rd grade level. By any mandate that all students meet standard competencies by an arbitrary date in the spring, no matter their starting points, Golden would have been a failure—and so would I. But I still believe that my grandest accomplishment as a teacher was working with Golden in a coherent and sustained way so that together, we moved him forward as a reader more than three grade levels in one school year.

One question Golden's presence evoked in me was harder to answer than the rest. That question was "How do I grade him?"

I knew from the outset that the "traditional" and often revered system of grades and report cards created an undertow that threatened to swallow up any progress he made in school. Understanding that clearly, I felt that to be honest with him I needed to say the truth. "I want to help you see that you can read, Golden. I promise to work hard with you to make that happen. And I want you to promise to work hard with me. I do need to tell you, though, that no matter how hard you work, you won't be able to pass this class because to do that, you have to work at a level that is totally out of your reach this year. Still, I hope you'll come to school every day really excited to learn." I didn't say that to him explicitly, of course, but the ideas reflected in the "statement of truth" that ripped through my head in the hallway stayed with me.

What role should grades play with Golden and with the steady progression of struggling learners who came to me each year? And how about with students who are one or two or five years above grade level? Are there redemptive messages for them in our system of grades and report cards?

The purpose of this chapter is not to provide a digest of general grading theory and practice, but rather to investigate how best grading practices can guide teachers in understanding how we can (and how we shouldn't) think about grades and reporting so that students like Golden, students who are advanced, and students in between are well served by our grading practices.

A Bit of Background

Paul Dressel (1983) of Michigan State University defined grading in a way that likely represents the musings of many teachers at all levels around report card time at some point in their careers. A grade is "an inadequate report of an imprecise judgment of a biased and variable judge of the extent to which a student has attained an undefined level of mastery on an unknown proportion of an indefinite amount of material" (p. 12).

Grades have massive power in our schools and in the lives of the people whom we grade. We often speak of grading as though it were somehow sanctified—a thing that has to be as it has always been because to change the system would somehow create a disruption too great to bear. In truth, grades run through human filters. They are subjective. They are messy. It's probably healthier to give credence to Dressel's (1983) view than to the reverence that often prevails in conversations about grading.

Tonya is fond of saying that there is no real problem with grades and differentiation. The problem is that grading practices in general are such a mess that grades plus *anything* creates an issue. And yet, there is a literature on best practices in grading, developed by experts who study and research the topic carefully. Any consideration of grading and differentiation needs to begin with at least a brief explanation of the purposes of grading as defined by those with expertise in this area. The longer discussion that then follows on grading and differentiation ought also to reflect our best knowledge of sound grading practices that stem from the field of measurement, as opposed to emanating from "how we've always done things here." In regard to that last point, Ken O'Connor (2011) offers a relevant observation when he notes that although "we know more than we ever knew about how people learn, traditional grading practices persist. . . . These practices often not only result in ineffective communication, but may also may actually harm students and misrepresent their learning" (pp. xi–xii).

The purpose of grades, strictly speaking, is "to communicate information about a pupil's academic achievement. . . . Grading is a process in which a teacher transforms assessment data into meaningful information about pupil performance that is conveyed to pupils, parents, and others" (Airasian, 1997, p. 261). This brief explanation highlights three elements worth remembering. First, the primary goal of grading should be to help parents and students (as well as other stakeholders) know where a student currently stands in terms of academic achievement, with achievement defined as "performance measured against accepted published standards and learning outcomes" (O'Connor, 2011, p. 7)—in other words, to communicate clearly what a student knows, understands, and can do at a particular time. Second, to achieve that purpose, the information communicated and the method of communication must be clear to those who use it. Third, the grading process is a separate stage in assessment from administering and providing feedback on or scoring student work. In regard to the latter point, O'Connor (2011) distinguishes between "marks" and "grades." Marks, he suggests, are numbers or letters teachers put on student work that may later become part of a grade. A grade, on the other hand, is a symbol reported at a designated time as a summary statement of a student's performance.

Despite the assertion that grades exist to communicate to students, their parents, and others who need the information, grades are used for multiple purposes, including, but by no means limited to, communication of current student academic performance. These additional purposes include (1) ranking students (for example, computing class rank and identifying a class valedictorian); (2) motivating students to learn, or punishing them; (3) grouping, sorting, or placing students in classes; (4) providing teachers with information for instructional planning; and (4) teacher and program evaluation (Brookhart, 2004; O'Connor, 2011). These uses of grades have conflicting purposes and suggest different approaches to the grading process. Using grades for *all* of these purposes calls into question the validity of the grades for *any* of the purposes. More to the point, the swamp created by multipurpose grading makes it almost impossible for parents or students to be clear on what students know, understand, and can do at a given time relative to specified goals or to use that insight to support student learning.

It's critical, then, in making grades a positive and productive element in the teaching-learning-assessment cycle, that teachers and other educators understand fundamental principles of effective grading and work diligently to ensure that the principles are reflected in the grading and reporting process. The following section describes four important concepts that are foundational to good grading practices: error, reliability, validity, and teacher bias.

Foundations of Effective Grading

Understanding and addressing the concepts of error, reliability, validity, and teacher bias provides four legs of a stable grading process. The concepts should be present in teacher thinking any time the teacher is planning for, administering, reviewing, and reporting from assessments. The goal is to *increase* reliability and validity and to *reduce* error and teacher bias.

Jamie really loves reptiles and knows a great deal about them. Yesterday he took a test on reptiles in science class. He misunderstood the directions for one part of the test,

however, and so his grade was only a 75. In truth, he knows much more than the test would have revealed even if he had not misunderstood the directions.

This brief scenario illustrates the concept of *error*. Because assessments are constructed by human beings and taken by human beings, they are always likely to be imperfect measures of a student's true knowledge of a topic. The difference between a score on an assessment and what a student really knows, understands, and can do related to that topic is called *error*. Error can occur for countless reasons: a poorly worded test item, a student's lack of fluency in the language in which assessment directions are written, a student's learning disability or attention problem, inadequate time for completing the assessment, a student who is hungry or not feeling well or is worried about home, a teacher who is intimidating to a student, and so on. A key goal of effective assessment is striving to eliminate error—and understanding that some error will remain nonetheless. Designing and administering assessments so that they get as close as possible to the student's "true score," or full understanding, should be a teacher's goal. Much of the rest of this chapter spotlights principles and practices for reducing error in assessments and grading.

Danielle received an *A* on the algebra test. She said to her friend as class ended, "Wow! This was my lucky day. I remembered exactly what the teacher did on the board and copied it from my brain to the paper. I guess that must have been the right thing to do, but if I had to take the test again today, I'd bomb!"

Danielle's experience calls into question the *reliability* of the test she took. Because she didn't understand what she had "learned," the chances are good that if she took the test again tomorrow or next week or in another teacher's class, her score would vary greatly. Reliability raises the question of consistency or stability of results. The more stable or consistent a student's score on multiple assessments on the same KUDs, the more reliable the measure, and the greater confidence teachers can have in the inferences they draw from the assessment. Using a greater variety of assessment formats and collaborating with colleagues to reach agreement about what really matters most in a particular topic or unit are two ways to increase reliability.

Mayan plans to talk with kids a year ahead of her in school when she takes her first big biology test next week. They'll know whether she should study the textbook or her notes. She's hoping it will be the textbook. She can sort of tell what that's about. When she takes notes in class, she often isn't sure if she's writing down the right things. Until she can figure out what a teacher wants, it's hard to know how to prepare for a test.

Mayan's plan to prepare for the biology test raises the issue of *validity*, or whether an assessment accurately measures what the teacher intends it to measure. If the teacher had been clear on the unit's KUDs, had taught with the KUDs at the forefront of his thinking, and had designed the test to measure those KUDs, it's much more likely that Mayan would have succeeded and that the test would have been valid. Using "backward design" (Wiggins & McTighe, 1998), making sure students are aware of KUDs and how they are reflected in instruction, targeting formative feedback on KUDs, and checking assessment items, directions, and criteria for success against specified KUDs are a few ways to increase validity of assessments.

Philip and Liza are looking at the grades and comments they just received on their summative projects on myths. They won't look at one another's work, but if an objective teacher compared them, it might raise the question of why Philip's grade is so much higher than Liza's. They both created myths that suggest an understanding of the purpose myths play in a culture, which is what the directions stressed. Philip's illustrations are terrific, however, and Liza's handwriting is not great. Besides, Philip has shown such an interest in the topic in class, and Liza has seemed bored much of the time. Philip's mom even brought in some resources on myths from other cultures and commented on how hard he was working on his project.

This scenario plays out in classrooms every day, not because teachers intend to be unfair, but because they are human. It's difficult *not* to favor the student who seems so invested in class—or whose parents do. It's hard *not* to bring some negativity to a grading task when a student consistently adds stress to a classroom. Teacher *bias* happens because teachers are people whose feelings, experiences, and expectations come to work with them every day. Wise teachers acknowledge the inevitability of bias and do everything they can to reduce it. Teachers can reduce bias as they establish clear criteria and rubrics or quality indicators for student work and systematically provide feedback or grades based directly on those goals and indicators. They can also reduce bias as they work with colleagues to be mindful of bias in the classroom and how it affects both teaching and learning.

In much of the remainder of the chapter, we provide principles and practices for quality assessment and grading. Look for references to *error*, *reliability*, *validity*, and *bias* in explanations. Think about the concepts also in regard to your own work. Working consistently to increase reliability and validity in assessments and to reduce error and teacher bias reflects a desire to engage in best-practice assessment. It also is highly likely to minimize most of the "problems" educators may assume exist with assessment and grading in an effectively differentiated classroom.

Issues Related to Assessment, Grading, and Differentiation

Probably the most frequently asked question about differentiation by educators around the world is "How would I grade it?" There is a broad, pervasive sense that differentiation and grading practices are somehow at odds with one another. In that vein, it's useful to

think about issues related to assessment, grading, and differentiation in two categories: issues that are really misconceptions and issues that are fundamental to the philosophy and goals of differentiation.

Misconceptions

Two common issues with assessment, grading, and differentiation fall into the misconception category. The first has to do with content goals or KUDs, the second with a "standard" for grading and reporting.

Some educators think of differentiation as having different goals for different students. Not only does this perspective make teaching and learning much more confusing and complicated, but it turns grading into a nightmare. It's essential to know that defensible differentiation seeks to provide multiple pathways and support systems to the same content goals so that virtually all learners can achieve higher levels of success with the *same* essential knowledge, understanding, and skill. Thus a teacher in a differentiated classroom is not grading students on different goals (with the exception of students with certain IEPs), but rather will provide feedback and grades based on a student's status relative to the same KUDs.

Further, some educators feel as though differentiation calls on teachers to grade struggling students "easier" and advanced students "harder." That, too, is a misconception. Differentiation is not about jiggling grades. As we discuss with a bit more detail later in the chapter, virtually all students in a differentiated classroom should be graded against the same clearly delineated criteria (KUDs). What a differentiated classroom does is provide an environment that maximizes student opportunity to achieve and, when possible, move beyond those criteria.

Core Issues

Although some issues related to assessment, grading, and differentiation are, or ought to be, nonissues, at least three interrelated issues integral to the philosophy of differentiation are directly affected by assessment and grading practices. First, differentiation proposes that classroom practices—including assessment and grading—should be designed to contribute to a growth mind-set in students and teachers. Second, differentiation exists to keep students' success-to-effort ratios in balance—that is, students at all levels of proficiency clearly see that their hard work (effort) generally leads to visible success. Third, differentiation proposes that a sense of team, community, or collaboration is integral to student success—that students and teachers work together respectfully to support maximum growth for all. Many current grading practices—related to preassessment (or lack of it), to ongoing assessment, to summative assessment, to report cards—work directly against these three goals.

Commenting on the unspoken effect of grades, Earl (2003) reflects, "For some students, the certainty of praise and success in school has become a drug; they continually need more. For many other students, year upon year of 'not good enough' has eroded their intellectual self-confidence and resulted in a kind of mind-numbing malaise" (p. 15). Current assessment and grading practices are also counterproductive for a third group of students—those in the midranges of achievement who get the continual message that they are "just average" and not likely to change.

Needless to say, these three groups constitute a large proportion of the school population. Ways we teach, assess, and grade too frequently work against development of a belief that we can learn virtually anything necessary for success in school if we work at it and have a good support system. The way we teach, assess, and grade too frequently suggests to some students that effort rarely pays off, whereas to others it suggests that hard work is not necessary for achievement. Both messages are lethal to motivation. How we teach, assess, and grade too frequently creates winners and losers in the classroom and undercuts the sense that we are all stronger when we learn from and teach one another. Therefore, an effectively differentiated classroom is invested in assessment and grading practices that are in sync with responsive teaching practices—ones that clearly contribute to enlisting the effort of a full range of students to do the hard work of learning.

We also believe, however, that classrooms successful in maximizing the capacity of a broad range of students are built on best practices in *all* elements of teaching—learning environment, curriculum, instruction, classroom leadership and management, *and* assessment and grading. So the essential question for this chapter is this: Are there practices that reflect and support best-practice assessment and grading as well as the underpinnings of differentiation?

Our conclusion is that best practices in assessment and grading are fully compatible with and supportive of the goals of quality differentiation. That is, when educators implement the advice of experts in the field of measurement, there is no conflict with the philosophy and practice of differentiation related to assessment and grading. In fact, best-practice assessment and grading facilitates and enhances a robustly differentiated classroom.

Grading and reporting should be seen as particular moments that happen periodically in a much longer cycle of planning, teaching, learning, feedback, and measurement. Teaching and learning should be the primary focus of the classroom. Pre- and ongoing assessments inform the teaching-learning process. At key points in a unit of study, summative assessments measure student growth toward and beyond KUDs and result in marks entered into a gradebook. At the end of a designated marking period, the teacher converts marks into grades and communicates them on a report card. Grading and reporting should reflect and support good classroom practices, not dictate them.

Guiding Principles for Effective Grading Practices

Measurement and assessment experts generally agree on a number of attributes of effective grading practices. For example, grades should be consistent across classrooms (Brookhart, 2013). A focus on the same KUDs that serve as the basis for grades should be consistent across classrooms. That is, what matters most in teaching and assessment in one 4th grade math unit should be what matters most in teaching and assessment of the same unit in the other 4th grade classrooms. Grades should also be accurate. In other words, there should be no "mathematical distortions" resulting in an inaccurate picture of student status. Grades should be meaningful to those who receive them. In other words, grades should communicate clear and useful information. Finally, grades should support learning. That is, they should do the best possible job of communicating precisely what a student knows, understands, and can do at a particular time (O'Connor, 2011). Grades that are consistent, accurate, meaningful, and supportive of learning will necessarily reflect a teacher's successful efforts in increasing reliability and validity in the assessment and grading process, and minimizing error and teacher bias.

The principles that follow contribute to grades that are consistent, accurate, meaningful, and supportive of learning (Black & Wiliam, 1998; Earl, 2003; Hattie, 2012a; O'Connor, 2011; Tomlinson & McTighe, 2006; Wiggins, 1998). The principles necessarily involve formative and summative practices as well as the "grading moment" because those are all part of the assessment cycle. After a brief discussion of each principle is a statement about how the principle contributes to the foundational concepts of effective grading practice (reliability, validity, error, and bias) and to the descriptors of effective grading practice (consistent, accurate, meaningful, supportive of learning). There is also a statement about the role of the principle in addressing the differentiation-specific goals of developing a growth mind-set, balancing the student's success-to-effort ratio, and building classroom community.

1. Base Grades on Clearly Specified Learning Goals

It's a simple idea—the notion that students can hit any learning target that they can see and that holds still for them (Stiggins, 2001). Obvious though the idea may be, however, it's one we struggle to enact in classrooms. Virtually all teachers can specify what students will cover in a week or a unit of study and what students will do in a given sequence of learning. Few of us can specify with confidence and clarity what students should know, understand, and be able to do during those same time spans. Lacking that clarity before a unit ever begins, curriculum becomes a collection of amorphous information, lessons go off course, and assessments turn into a guessing game. On the other hand, when a teacher is clear about KUDs and how they work together to help learners

make meaning of and use content, it's not a great leap to make sure students are clear about them as well. At that point, lessons have purpose and students understand that purpose; assessments are transparent vehicles for helping students see their proximity to the targets they know about and for helping them continue growth toward and beyond those targets; and grades communicate student status relative to known targets. Without clear KUDs and effective use of them in all aspects of instructional planning, learning targets wiggle or disappear from view. "Students become accustomed to receiving classroom teaching as an arbitrary sequence of exercises with no overarching rationale" (Black & Wiliam, 1998, p. 143). Grades become mysterious symbols accorded considerable power but of dubious worth.

Contribution to effective grading practices in general: This principle of clearly specifying KUDs increases reliability by providing consistency across classrooms, and it increases validity by ensuring that assessments measure what they are intended to measure. It decreases error by focusing students and the teacher on what matters most, and it decreases bias by providing specific criteria against which marking will occur.

Contribution to goals of differentiation: This principle increases the likelihood that student effort in learning and participation in assessments will result in success because there are clear targets and criteria for success. It also supports a growth mind-set because clear learning targets enable students to work with efficacy and confidence toward those goals. And it contributes to community by making clear the shared goals and achievement criteria toward which students can help one another progress.

2. Use Grades That Are Criterion Based, Not Comparative or Norm Based

When students are compared with one another, they come to believe the goal is competition rather than personal improvement. Often the result is that struggling students come to believe they lack the capacity for success, and high-achieving students conclude that success is an entitlement and not the result of commitment and hard work (Black & Wiliam, 1998). A teacher's aim should be to do everything possible to make sure all students achieve specified goals or criteria for success, not to sort and rank them. Teachers are increasingly effective with their professional work as more and more students succeed with specified criteria. Few of us would opt to sign on with a surgeon who believed in curing on a curve. Grading on a curve "is an artifact that bears no clear relation to valid standards, and indeed is psychometrically indefensible at the classroom level" (Wiggins, 1998, p. 248). It might provide some "information about a student's rank in a class, but does not speak to the student's academic achievement" (Marzano, 2010, p. 17).

Contribution to effective grading practices in general: This principle increases reliability by providing stable achievement criteria, and it increases validity by ensuring that grades are based on content goals rather than personal variables. It reduces bias that occurs as teachers attempt to compare individuals, and it reduces error that occurs as teachers attempt to compare individuals rather than assessing work according to stable criteria.

Contribution to goals of differentiation: This principle enables students to "compete against themselves" as they strive to achieve stable goals rather than feeling they will always suffer by being compared to more advanced students or that they must always be "at the top of the pack." By focusing on growth, it encourages a growth mind-set in all students. It balances the success-to-effort ratio by emphasizing personal growth rather than competition, and it contributes to community by reducing competition and diminishing a culture of winners and losers.

3. Don't Overgrade Student Work

Learning challenging content—really learning it so that it makes sense, is useful, and is transferable—takes hard work and lots of practice. Along the way to this kind of deep learning, false starts, mistakes, and redirection will necessarily occur. Grading everything students do discourages the very kind of grappling that is fundamental to complex thought and genuine understanding. It's important, then, to help students see a direct connection between what we ask them to do for practice at school and at home and their academic growth—between the quality of their practice and their developing competence. Young people routinely engage in strenuous practice to get better at basketball, soccer, playing a musical instrument, drawing, and so on. They literally "see" that the practice moves them forward. They don't expect or want a grade for every segment of practice because it is clear to them that the practice makes them more skilled when a "grading moment" (game, swim meet, recital, contest, exhibition) occurs. The endemic teacher comment that "Students won't do the work unless we grade it" points to a disconnect between practice and outcome in students' minds. Rather than solving the problem, grading everything students do perpetuates the problem. Grades should derive from summative, not formative, assessments. When we grade students while they are learning, they often see the grade as the end of learning (Hattie, 2012a).

Contribution to effective grading practices in general: This principle increases reliability and validity because it requires taking into consideration when student learning is likely to be more secure. It reduces error by providing time for practice to solidify learning rather than judging learning prematurely.

Contribution to goals of differentiation: This principle encourages a growth mind-set by focusing students on learning rather than premature judgment. It encourages

struggling learners to persist by deferring judgment and advanced learners to accept meaningful challenge without fear of "losing points" before they've had a chance to develop competence, thus keeping the success-to-effort ratio balanced.

4. Use Only Quality Assessments

Quality assessments are associated with higher student achievement (Black & Wiliam, 1998), perhaps because those assessments suggest teachers whose planning and instruction are of high quality as well, and perhaps because such assessments encourage students to participate more enthusiastically in the learning process. Assessments are effective when they measure student proficiency on clearly designated learning goals (KUDs) that are known to students, and when they are carefully aligned with teaching and learning. No trick questions or "gotcha" items! It's important also that the method of assessing students be a match for the kind of learning we mean to assess. For example, a thoughtfully constructed multiple-choice or fill-in-the-blank test is often well suited to assessing student *knowledge*. A performance assessment or well-designed product assessment is typically better for determining students' understanding of content and their ability to apply and transfer that *understanding*. It's important, too, to ensure that the assessment provides ample opportunity for students to reveal their proficiency with a particular segment of content. In other words, offering only one item on an important idea may increase the chance that a student appears to misunderstand the idea when, in fact, the student simply misunderstood that one question. It's also critical to consider assessment-related issues that can increase error in the assessment. For instance, a student may not be able to read the directions well enough to follow them, or may have difficulty following multistep directions and the assessment contains five steps, or may consistently need additional time to complete an assessment, or may lack home resources required for a product assessment. Parental assistance also increases error in grades. In such instances, the assessment falls short of the critical goal of revealing what a student knows, understands, and can do related to essential content.

Contribution to effective grading practices in general: This principle increases reliability across classrooms, and it increases validity by focusing the assessment on what matters most. It reduces error by adequately sampling important knowledge, understanding, or skill; eliminating "gotcha" items; and addressing student variables that can result in inaccurate representations of mastery.

Contribution to goals of differentiation: This principle contributes to a balanced success-to-effort ratio and growth mind-set by ensuring a focus on essential and specified goals known to the student; adequate sampling of student knowledge, understanding, and skill; and accounting for student variables that can skew performance.

5. Reduce "Grade Fog"

Grade fog arises from anything teachers do in the teaching-learning-assessment grading cycle that muddles the meaning or clarity of the grade. Recall that a grade should communicate as clearly as possible to students, parents, and other stakeholders what a student knows, understands, and can do at a given point in time. Well before time for grading in a teaching-learning-assessment cycle, grade fog begins to appear when teachers deduct points from an assessment because a piece of work isn't neat, because it is late, or because the student's name is left off the paper. Grade fog continues to obscure the meaning of the grade when teachers add extra credit to a grade, include bonus points, count attendance as part of a grade, include group scores, incorporate student behavior in a grade, or count homework in grades. All of those relatively common practices make considerably less clear what that student's level of academic mastery actually is through the grade that is eventually communicated. It's not uncommon for a student to receive an *A* on a summative exam at the end of a marking period but a *C* on his report card because he turned in homework only sporadically. It's not unheard of for an eager child with weak reading skills to turn in extra-credit work and receive a *B* on a report card in language arts when the student's actual skill level would indicate a *C* or a *C-* would be more accurate. When a grade serves multiple masters, it serves none of them well. If you're thinking, "Yes, but homework teaches responsibility" or "It's important for students to work effectively in a group," we agree. The discussion of 3-P grading (Principle 8) will address those issues.

Contribution to effective grading practices in general: This principle increases reliability and validity and decreases error by focusing assessment results and grades on important and articulated goals rather than less salient variables. It reduces teacher bias by maintaining a grading focus on important and articulated *content* goals rather than on *student* variables that are less salient.

Contribution to goals of differentiation: This principle helps develop a student-growth mind-set by keeping the focus on learning and learning outcomes rather than on variables extraneous to learning, and by minimizing grades as rewards or punishments.

6. Eliminate "Mathematical Grade Fog"

Two mathematical processes commonly used in grading are responsible for both imprecise communication about student learning and unnecessary student discouragement. One of those is giving zeros when work is missing or if students have cheated on assessments. "Grades are broken when zeros are entered into a student's academic record for missing evidence or as punishment for transgressions. . . . Use alternatives, such as reassessing to determine real achievement, or use 'I' for Incomplete or Insufficient

Evidence" (O'Connor, 2011, p. 95). Guide students in developing plans for making up missed work. Develop compensatory alternatives to zeros for significant infractions such as cheating.

Zeros are problematic on at least three levels. First, they have such an extreme effect on grades that it's difficult for a student's grade to ever really recover. Second, rather than teaching students accountability for their work, zeros actually teach students they don't really have to do work if they are willing to accept a zero instead. Sadly, many discouraged students accept the zero and never master the goals attached to missing work. Finally, zeros significantly discourage student investment in the learning process—a particularly costly outcome for students who already find school to be distasteful and the prospects of academic success to be implausible.

A second source of mathematical grade fog is the process of averaging grades. Grades that reflect a student's "mean" score, asserts O'Connor (2011), are "mean" to students because they overemphasize outlier scores (most commonly, low ones) and distort the report of a student's actual learning. It may be that some assessments contain easier—or more complex—items than others and therefore should not receive the same weight in grading. Likewise, some assessments may measure more important concepts than others. In other instances, a performance assessment might provide a more accurate representation of a student's understanding of content than a multiple-choice test given at about the same time. There are many reasons why not all assessments in a marking period are equal in importance and therefore why they should not be weighted equally in computing grades.

Rather than computing a mean, it may make better sense to use a student's median (middle) score or to use the student's mode (most often earned) score. In fact, a number of experts in grading (e.g., Guskey, 1996; O'Connor, 2011; Wiggins, 1998) suggest that it is unwise to use *any* mechanical formula or process for computing grades. They advise that teachers understand that grading is judgment based and that effective grading practices call on teachers to use their own best professional judgment in determining what grade most appropriately represents a student's achievement at a given time. A letter grade on a report card appears definitive and objective, but it actually covers up an array of judgments, ambiguities, and questions that need to be aired and debated (Wiggins, 1998).

Contribution to effective grading practices in general: This principle increases reliability and validity of grades by maintaining a focus on what students actually know, understand, and can do at key points in the learning cycle. It reduces error by providing a more accurate picture of student proficiency related to specified goals, and it reduces bias by decoupling behavior and grades.

Contribution to goals of differentiation: This principle supports development of a growth mind-set and a balanced success-to-effort ratio by maintaining a focus on

learning. It avoids additional discouragement of struggling, alienated, or disenfranchised students by removing behavior from grades.

7. Grade More Heavily Later in a Grading Cycle Rather Than Earlier

This principle addresses the need for practice in learning as does Principle 3, but from a slightly different vantage point. The purpose of this principle is illustrated well by Derrick, a student from a low-income home who struggled to do well in school during much of his adolescence. To his credit, he continued the struggle and ultimately went to college and was quite successful there. He reflected as a college student on things that made it very hard for him to persist in school when many of his friends did not. The hardest times for him, he recalled, were numerous instances when teachers said to him that his report card grade was lower than they'd hoped. Their comments often went something like this: "You made an *A* on the exam, but you had a couple of test grades early in the quarter that pulled your grade down." Derrick said, "I always felt like I was being punished for keeping on somehow." It would have been great if teachers had said, "I know you're working hard and it's paying off. At the beginning of the quarter, your marks were lower, but you kept working and mastered the content by exam time. That shows me you've learned what you needed to learn. Good for you!" When a student gets better marks later in a marking period, it suggests effort and growth—two prime predictors of success. Earlier deficiencies *in the same content* ought not to erode the student's growth or discourage persistence. The fact that a student learned more as the quarter proceeded should also indicate that the teacher taught in such a way that she was able to help the student overcome initial difficulties.

Contribution to effective grading practices in general: This principle increases validity of grades by emphasizing student performance after adequate opportunity to learn rather than before learning is complete. It decreases error by avoiding premature assessments of student "learning."

Contribution to goals of differentiation: This principle increases students' growth mind-set and success-to-effort ratio by recognizing student persistence in learning. It increases teachers' growth mind-set by calling attention to student growth rather than focusing on earlier deficiencies.

8. When It's Time for Report Cards, Use 3-P Grading

Earlier in this chapter we asserted that teachers and other educators use grades to represent so many and often conflicting elements that the grades become essentially useless in communicating clearly what students know, understand, and can do. That reality, affirmed by many experts in grading, does not, however, negate the fact that teachers want to help students develop in multiple ways—including, but not limited to, taking

responsibility, collaborating with peers, striving for quality work, and so on. Some of these factors are important in developing a growth mind-set and in becoming a successful learner. Experts in measurement agree that information about a variety of aspects of student development can be useful to parents and students. What they disagree with is lumping a mishmash of information into a single symbol. "When we try to pack a wide variety of student characteristics into one grade, that grade is not a valid reflection of any one of them" (Stiggins, 2001, p. 441). This practice, Stiggins (2006) asserts, results in hodgepodge grades that produce a confusing amalgam that is impossible to interpret and likely presents an inaccurate picture of a student's proficiency.

One solution to the dilemma is to practice what is called "3-P grading"—that is, to report separate grades for a student's performance or product (our best information about what the student knows, understands, and can do), the student's process (habits of mind and work that characterize successful people in a wide range of endeavors and that we hope to help students develop), and the student's progress (student growth in specified KUDs since the prior marking period) (Guskey, 2006; Stiggins, 2006; Wiggins, 1998). *It should go without saying that the three Ps should not be averaged into one report card grade.* Rather, they should be reported separately and with clear indicators of what each element represents. The product or performance grade unambiguously reports only student status on KUDs. The process grade includes things like whether the student persists in the face of difficulty, uses feedback to improve performance, asks for clarification when needed, seeks multiple perspectives on issues, and so on. If a teacher is convinced that homework for a student is appropriately challenging and useful in promoting that student's academic development, and that it is the work of the student alone and not the parent, it can be included in a process grade and as an indicator of accepting responsibility for assigned work.

The 3-P approach to grading is tightly aligned with the growth-mind-set message that if individuals work hard and intelligently to master specified goals (process), they will continue to grow toward those goals (progress), until they master those goals (product or performance) and perhaps even move beyond them. Effective 3-P grading requires teachers to develop and share thoughtful continuums of progress in their content areas, which might begin with learning progressions such as those discussed in Chapter 4. In addition, it's important to develop and share indicators or rubrics that describe characteristics of productive habits of mind and work (process). A useful source for understanding the relationship between habits of mind and success and for building descriptors of habits of mind in the classroom is the work of Art Costa and Bena Kallick on this topic—for example, *Learning and Leading with Habits of Mind: 16 Essential Characteristics for Success* (2008). Likewise, of course, as we have stressed throughout the book, it is essential that teachers provide clear descriptors of performance targets so that students and parents understand the game plan for schoolwork

and homework—and the meaning of a performance or product grade. In addition to increasing student understanding of and efficacy with the learning process and parent clarity about the meaning of grades, working from reasoned and clearly articulated descriptors of process, progress, and performance—especially when those descriptors are shared across classrooms—helps teachers increase reliability and validity of grades while decreasing error and bias.

It's useful in the context of 3-P grading to distinguish between effort and process. Teachers with a growth mind-set encourage students to work hard, or to contribute effort, in order to grow academically. That encouragement is well founded in terms of the critical role of effort in success. When it comes to grading, however, the vocabulary needs to shift a bit. It's not possible to observe effort accurately, and we can't (or ought not try to) grade what we can't observe. So in the context of 3-P grading, there is a vocabulary shift from *effort* to *process*. We can observe that a student willingly revises his work to improve its quality. We can observe that a student seeks help when she is stuck on some aspect of her work. We can observe that a student develops a time line for completing a complex task and adheres to it. Those sorts of "habits of mind and work" are indicators of the sorts of "intelligent processes" that are associated with successful people. Good grading practice requires that we use visible indicators. However, it's also extremely important that teachers not just generally talk with students about "hard work" or "effort," but rather that they teach students the attributes of work that make effort pay off in terms of performance and guide students in developing and enacting those attributes.

Educators can certainly design report cards around 3-P grading. Lacking such report cards (or as districts move in that direction), teachers can and should talk with parents and students about 3-P grading, making clear the value of understanding a student's position in each area at a given time and using the knowledge to support student growth. Teachers can report a student's performance, process, and progress in a report card comment section, on an addendum to a report card, in regularly scheduled e-mail communication, during parent night conferences, as a part of student portfolios, through student-developed self-reports, and in other ways.

Contribution to effective grading practices in general: This principle increases validity of grades and decreases error by separating performance from process and progress.

Contribution to goals of differentiation: This principle reinforces the message for the full spectrum of students that working hard and intelligently leads to growth and ultimately to mastery and even moving beyond important goals.

9. Open Up the Assessment and Grading Process

Involve students in the grading and reporting process as well as in pre- and formative assessment. Students at a young age should be able to connect the dots between their

learning goals, their work in class and at home, summative work, grades, and reporting. They should be able to explain to themselves, their teacher, and their parents when their habits of work and mind contribute to their growth, when they don't, and what they can do to focus their efforts to benefit their growth. Further, don't make report cards the only communication with parents and students about student learning. Ongoing and shared conversation about students' personal and academic development provides opportunity for everyone involved to be an informed contributor to student success. Grading can be demystified and, more important, shared ownership of the learning process is possible as teachers emphasize useful feedback for learning and deemphasize the primacy of a single grade issued four times a year.

Contribution to effective grading practices in general: The principle of open dialogue should contribute to increased validity of grades as teachers, students, and parents develop a common understanding of goals and processes.

Contribution to goals of differentiation: This principle encourages a growth mind-set by helping students gain understanding of, responsibility for, and partnership in assessment and reporting throughout the learning cycle.

A Final Caveat About Grades and Differentiation

It's easy to succumb to the notion that somehow grades and grading practices can solve significant classroom problems. For example, teachers seem to hold out hope that grades will motivate reluctant learners to invest more energy in learning, or that they will continue to elicit the eager participation of high-achieving students, or that they will encourage "absent-minded" students to pay attention more regularly. In reality, grades often reinforce a sense of hopelessness in struggling learners, motivate students with good grades to get more good grades rather than to learn, and appear irrelevant to students who have their own agendas.

Students bring to the classroom a variety of differences in academic orientation, in-school and out-of-school experiences, interests, ways in which they prefer to learn, fundamental language skills, and so on. Regardless of these individual differences, all students are expected to master the same content standards unless there are formal plans on record that indicate otherwise. The dual reality of student differences juxtaposed with common expectations requires educators to create classrooms that respect those differences and are thus structured to provide varied ways in which students can meet common content expectations.

It is effective attention to student variance that encourages students to reach for successively higher levels of proficiency, provides an environment that supports the risk of learning, and presents students with a reason for optimism that each day will result in incremental success toward important goals. Neither evidence nor common

sense suggests that grades are effective mechanisms for "fixing" student differences. The best-case scenario for grades is that they present students and parents with accurate and intelligible representations of development in a context where all efforts are aimed at moving students as far forward as possible from where they begin in a content area by addressing their varied readiness needs, interests, and approaches to learning.

In the field of measurement, instruction is referred to as a "treatment" students receive. Designing that treatment to maximize the capacity of each learner is the core mission of differentiated instruction and ought to be the core mission of the educational endeavor. Quality grading practices facilitate that mission but cannot replace it.

Effective Grading in a Differentiated Classroom: A Quick Review

Grading is a process that occurs at designated end points in a much longer cycle of teaching, learning, and assessment. The goal of grades is to communicate clearly to students, parents, and other stakeholders a student's status relative to clearly delineated learning goals. Because grading is done by humans, it involves judgment, subjectivity, and error. It's important to acknowledge that reality, which has both benefits and liabilities for students. Teachers who seek to use best-practice assessment and grading strive to ensure reliability and validity in their assessments and grades while also working to reduce error and bias.

Certain principles support quality grading and associated assessment practices and generally increase reliability and validity while also reducing error and bias. They not only reflect recommended practices in grading and assessment but also support three goals of a differentiated classroom: developing growth mind-sets in students and teachers, maintaining a balance in student success-to-effort ratios, and building classroom community. The principles are as follows:

1. Base grades on clearly specified learning goals.
2. Use grades that are criterion based, not comparative or norm based.
3. Don't overgrade student work.
4. Use only quality assessments.
5. Reduce "grade fog."
6. Eliminate "mathematical grade fog."
7. Grade more heavily later in a grading cycle rather than earlier.
8. When it's time for report cards, use 3-P grading.
9. Open up the assessment and grading process.

Cases in Point

Following are four classroom scenarios related to grading. The first three provide some structured-response options and one open-ended response option to guide your thinking about the grading situation described in the scenario. Whichever option you select as your preferred response, articulate your reasons for the response in relation to the guidelines presented in this chapter. The fourth scenario is messier because it contains more variables and is completely open-ended. There, too, think about what you understand to be effective grading practices. Use that understanding to develop advice you'd give to the teacher in the scenario.

Scenario 1: 10th Grade History

In a 10th grade U.S. History I class, Mrs. Wright's second 9-week report card grade is based on four quizzes, two in-class tests, and an-out-of-class project that counts as 30 percent of the grade. Carter obtained an *A*- average on the quizzes and the two tests but has not turned in the project, which is three days late, despite repeated requests from Mrs. Wright. In this situation, Mrs. Wright should (a) assign Carter a zero for the project and average his quiz grades, the test grades, and the project grade, which would give him a *D* average for his report card; (b) assign Carter a lower grade than an *A*-, taking off some points for his lack of effort in getting the project turned in on time; (c) exclude the missing project grade from calculating overall grades for the nine weeks; or (d) do something else.

Scenario 2: 7th Grade Science

Mr. Hernandez teaches in a heterogeneously grouped 7th grade science classroom. Zoe is an advanced learner who thinks clearly, asks thoughtful questions, and writes well. In looking at Zoe's recent work, Mr. Hernandez notices that she is not doing her best work, even though her work is better than that of the rest of her classmates. Zoe's effort has been minimal, but because of her academic ability, her work is reasonably good. In this situation, Mr. Hernandez should (a) lower Zoe's grade because she did not put effort into class work (b) give Zoe a lower grade in hopes that it encourages her to work harder (c) grade Zoe on the quality of the work; or (d) do something else.

Scenario 3: Pre-algebra

Ms. Barrett teaches a pre-algebra class that is heterogeneously grouped. Two exams contribute to the nine-week grade. In calculating Jose's grade, Ms. Barrett notices that Jose achieved a *C* on the first exam and an *A* on the second exam. In this situation, Ms. Barrett should (a) assign Jose an overall grade of *B*, which is the average of his two test

scores; (b) assign Jose an overall grade of *A*, since he showed improvement on the second exam; or (c) do something else.

Scenario 4: 3rd Grade Reading

Ms. Atkinson teaches 3rd grade and has several students in her class who are lagging behind in development of reading skills. Tia is an English language learner who is very shy and has great difficulty participating in class. Sammy and Chase seem immature for their age group. They have difficulty paying attention in class, often disturb other students trying to work, and rarely complete assignments without considerable prodding. When she prods, however, their work is marginally acceptable. Daniel has a weak vocabulary, which is a particular problem in reading nonfiction materials, although he decodes reasonably well and works hard in class. Millie is a puzzle. Sometimes she seems to read fluently. However, she frequently refuses to read aloud in small groups or individually with the teacher. Her written work does not indicate good comprehension, yet she can sometimes answer comprehension questions in class that no one else can answer.

As the grading period is ending, Ms. Atkinson realizes the students have roughly the same marks on the work in her gradebook, yet when she thinks about the students, she feels that Tia is working at a lower level of reading proficiency than the others. She also wants to encourage Daniel's hard work and wants his grade to be part of that encouragement. She doesn't know how to report on Millie's uneven profile. She knows Sammy and Chase can do better work than they generally do. How would you advise Ms. Atkinson as she begins to determine grades and make out her report cards for these students in the current marking period?

If we are good stewards of the opportunity to teach young people, we continue throughout our careers to develop and work from a grounded philosophy that dignifies the students we teach with thoughtful, challenging, and supportive pedagogy. We need to take care that we see grading as a reflection and extension of rather than a departure from the principles of informed, defensible, and nurturing classroom practice.

7

A Look Back and Ahead

> The three great essentials to achieve anything worthwhile are, first, hard work; second, stick-to-itiveness; third, common sense.
>
> —Thomas Edison

Imagine saving the money for a house you've hoped to build some day, going to an architect with ideas for house plans swirling in your brain, and having the architect say, "Well, that's nice, but I only build one floor plan and it's not the one you have in mind." Imagine feeling awful and going to a physician who says, "I understand what you're saying about how you feel, but today I'm prepared to treat only one set of symptoms, and it's not the set you brought with you into the office." Imagine a tax specialist who knows how to complete only one tax form, or a restaurant that carries only one item, served in one way, or a landscaper who plants only azaleas. And imagine someone's child—perhaps your child—going into a classroom where the teacher says—in actions, if not words—"I'm prepared to teach only one kind of kid, and it isn't you."

Differentiation, effectively implemented, extends our reach as teachers. It professionalizes us. It enables us to convey this message to all students who enter our classroom: "There's room for you to learn here as you are!"

Recently one of our University of Virginia teacher education students who had just completed his teaching internship took a class on differentiated instruction and summarized his understanding of the concept relatively early in the course. He began by saying he thought differentiation was a series of common-sense decisions made by teachers with a student-first orientation. He continued by delineating those decisions as he saw them. First, teachers have to be continually focused on creating a classroom environment that invites all kinds of students—every student—to take the risk of learning. If we fall short there, he suggested, everything else we do is diminished. Then, he reasoned, teachers have to continue to craft and hone the curriculum they teach so that it engages

young minds and prepares them to understand and take wise action in the world around them. If we fall short there, we've wasted human capacity. Next, he proposed that teachers who are invested in their students and care deeply about the content they teach will want to know how learning is progressing for each student in their care. Therefore, they regularly use formative assessment to be informed about how things are going for each learner. If we fall short there, we are teaching with our eyes closed. Next, he concluded, teachers would do something about what the formative assessments revealed to them. In other words, they'd attend to students' readiness needs, their interests, and their learning preferences in order to increase the prospects that each student could grow academically as much as possible. To fall short there is to deny students access to success. Finally, he concluded, teachers have to learn to guide a classroom in which more than one thing at a time can happen smoothly and efficiently when necessary. To fall short there is to render useless the other four elements.

The young man who offered this "common sense" definition of differentiation had written out his explanation because he felt he must be missing some critical element in the concept as his understanding was developing. When he received feedback indicating he understood the framework of differentiation well and expressed it clearly, he looked puzzled—almost displeased. "Well," he said, "if that's all differentiation is, why doesn't everyone do it?"

The ideas he understood to be at the heart of differentiation made so much sense to him that he simply couldn't figure out why he didn't see it all around him during his student-teaching experiences. Ultimately, he concluded his musing with one final question. "I mean, which of these elements would teachers think are unimportant?"

The correct answer to his rhetorical question is likely that most teachers would think all of those elements make sense—even common sense. But common sense is hidden from view by old habits and ways of responding to the world. Isaac Asimov, in his 1950 novel *I, Robot,* reflects that the obvious things can be the most difficult to see. People admonish us that the thing we're missing is as obvious as the nose on our face. How much of your nose can you see, he ponders, unless someone puts a mirror in front of you!

We hope this book helps you see a bit more clearly the common-sense role of assessment in a differentiated classroom. We hope it has held a mirror up to your practice so it's a bit easier to see where your work aligns with best-practice assessment—and where it does not. We hope, too, that the book has helped you develop your understanding of how the five key elements in a differentiated classroom interact to provide optimum conditions for learning for a broad variety of learners.

This book has focused on one of the five fundamental elements of differentiation: use of assessment to inform instructional planning. Figure 7.1 summarizes some key points from the book about that element. Blatant common sense characterizes the work of teachers who assume they need to monitor the learning of their students and then

adjust their teaching in ways that respond meaningfully to students' varied learning journeys. Recall that assessment is only formative when teachers use the assessment results to teach more effectively than they would have if they had not had or not used the assessment information. Quality use of pre- and ongoing assessment requires informed work, persistent reflection about that work, and the willingness to keep at it. It's a bit like exercise. Going to the gym once or twice doesn't accomplish much.

Critical as it is in supporting student success, however, assessment to inform instruction is not a stand-alone element in an effectively differentiated classroom. Effective use of formative assessment is impossible without clearly articulated, engaging, and complex learning goals (KUDs), or without tight alignment between an assessment and the KUDs it's intended to assess. In other words, without robust curriculum, formative assessment is likely to be insipid, ill focused, or both. Again, the common sense is evident. The power of assessment to inform teaching and learning derives from the power of curriculum to engage learners and guide them in understanding and acting upon ideas that are pivotal in the disciplines. And again, the work required to ensure quality curriculum is demanding and ongoing.

Effective instruction is dependent on both formative assessment and curriculum. It is shaped by curriculum. Flat, one-dimensional curriculum yields flat, one-dimensional instruction. Effective instruction is also responsive to learners as individuals rather than as a "flock." Therefore, effective instruction is necessarily informed by persistent assessment *for* and *as* instruction in order to provide the teacher with evolving images of the evolving learning trajectories of the diverse students in a classroom. Assessment *for* and *as* instruction is a potent catalyst for differentiation. It's almost impossible to study the results of such assessments and not see the reality that students came away from a lesson or series of lessons in very different places—no matter how convinced we are that our teaching was brilliant. At that point, differentiation isn't an "extra" that we might consider if there were additional time. Rather, differentiation is simply the next logical, common-sense step in teaching (Earl, 2003). Instructional planning is, or ought to be, entwined with curriculum and assessment in that assessment contents are dictated by curricular specificity about what constitutes essential knowledge, which specific skills must be a focus of learning, and which understandings act as a "magnetic field" for the knowledge and skills. In turn, assessment results will reveal student status with each of those elements. Finally, those results should inform a teacher's choice of instructional strategies as well as teaching and learning sequences. Some students will have mastered essential vocabulary, for instance, when others still struggle with unfamiliar words. Some students will compare and contrast, or defend a position, or design a test for a hypothesis quite competently, while others are at the front door of developing those skills. Some students will provide thoughtful illustrations of the understanding that "Math is a language to describe the world around us," while others are only able to

Figure 7.1
A Summary of Assessment Throughout an Instructional Cycle

	Pre-assessment	Ongoing Assessment	Summative Assessment	Student Self-assessment
Why	• To determine students' status relative to targeted KUDs, as well as interests and learning preferences as a unit begins	• To monitor students' learning needs relative to targeted KUDs, as well as to monitor interests and approaches to learning that may or may not be working well	• To determine the level of mastery each student has obtained with the targeted KUDs at key junctures in a unit	• To help students connect effort and growth • To engage each student in thinking about his or her own learning progress and needs • To help students develop strategies that support their learning
How	• Use a range of methods in a variety of formats (formal and informal) that make visible students' current standing relative to targeted KUDs	• Use a range of methods in a variety of formats (formal and informal) that make visible students' current standing relative to targeted KUDs	• Use a range of methods in a variety of formats (closed and performance) that assess both process and product outcomes	• Elicit student metacognition and reflection on performance at critical points in a unit of study
Quality	• Clearly defined learning outcomes (KUDs) • Tight alignment with the KUDs	• Clearly defined learning outcomes (KUDs) • Descriptive and detailed feedback to each student (if using formal methods)	• Accuracy, consistency, and fairness based on high-quality information • Clearly identified learning targets (KUDs) • Accurate reporting	• Students engaged in self-reflection, including monitoring and adjusting process • Students challenging their own learning
Use	• Provides information to guide differentiation of instruction as a unit of study begins	• Provides each student with accurate descriptive feedback • Provides information that can inform conversations between teacher and students • Yields information to guide planning for differentiated instruction • Provides descriptive information to stakeholders (teachers, parents) about student learning	• Indicates each student's standing relative to the targeted KUDs at critical points in a learning cycle • Provides a basis for grading	• Allows students to focus on the process of learning rather than simply right or wrong answers • Provides information for conversations between teacher and students • Can support independent student learning

provide concrete and evident illustrations, or no illustrations at all. Those realities provide the teacher's marching orders for instructional decision making.

Those realities also bind classroom leadership and management to curriculum, assessment, and instruction. On some days it will be necessary for the teacher to meet with a small group of students to preteach academic vocabulary, extend the challenge level of a writing assignment, or reteach a skill that some students didn't grasp the day before. On some days it will be necessary for students to work with a tiered task or wise for them to have the option of working alone or in pairs or triads. On some days it will make a positive difference in learning if students can use a variety of print or digital resources or if they can study models of quality student work done at various levels of complexity. In all these instances and a legion of other possibilities, flexible classroom routines are mandatory. Thus to accomplish what needs to be done to move each learner forward, the teacher has two roles in regard to classroom management. One is to develop routines and processes that allow more than one thing at a time to take place in the classroom—and to take place efficiently and effectively. The second is to enlist the understanding and partnership of students in creating a classroom that works for everyone. The common sense here is that if we have evidence that kids differ as learners—and we do—then classrooms that require everyone to work in rigid ways simply will fail many students. And so classroom management for differentiation asks the teacher to become an orchestra conductor—aware of and immersed in a common score, but at the same time attentive to the role and dynamics of various sections of the orchestra, and providing guidance and structure to ensure that each section functions as it should in order to contribute to a successful performance of the whole. Simply put, managing a differentiated classroom calls on a teacher to be a leader—not a dictator or a drill sergeant. It calls on the teacher to create a team or community around the shared goal of successful learning and to teach students the skills and processes necessary to contribute appropriately to that team.

The final element of effectively differentiated classrooms is learning environment, which is in many ways the most potent of the elements. Real learning requires struggle, and that particular struggle somehow lays us bare as we contemplate what might lie ahead: *Perhaps I'll fail. Perhaps I'll look foolish or incompetent or incapable. Perhaps I can't live up to this most defining of human traits—making sense of and having dominion over the world around me. Maybe peers will make fun of me. Maybe the teacher—a powerful person in the life of a learner at any age—will think poorly of me or expect more than I can give.* Creating a classroom environment that invites every student to learn and that fuels the learning process also calls on teachers to be leaders. But in this instance, the leader is one who balances challenge and support, who dignifies both the learner and the learning, who understands the fragility of being young and vulnerable and who therefore offers a harbor for learning. Van Manen (1991) expresses it well:

> Leading means going first, and in going first, you can trust me, for I have tested the ice. I have lived. I now know something of the rewards as well as the trappings of growing toward adulthood and making a world for yourself. Although the going first is no guarantee of success (because the world is not without risks and dangers), in the pedagogical relationship, there is a more fundamental guarantee: No matter what, I am here. And you can count on me. (p. 38)

When a teacher not only earns the trust of students but also teaches them to be trustworthy with one another, nearly anything is possible, and everything in the classroom is designed to make that belief more than make-believe.

For many teachers, planning for, thinking about, or even accepting the primacy of the five key elements of differentiation—and of powerful teaching—seems like too much. And yet, the novice teacher who spoke of the common sense of the elements makes a compelling argument for their logic. So perhaps as with all worthwhile and therefore necessarily complex ideas, what matters most is beginning to live with the idea, to try it out, and to learn from experience.

This book argues that thoughtful implementation of assessment *for* and *as* instruction is a fine place to begin with differentiation. Lorna Earl (2003) reminds us that "finding out about students as learners and people is the key to differentiation" (p. 87). She explains that differentiation doesn't mean a different set of lesson plans for every student, nor does it mean using ability grouping to reduce the student differences a teacher must think about. Rather, she says, it means recognizing and accepting the reality that students are unique individuals and using what we can learn about each student to plan instruction that optimizes learning for every one of them. "When teachers are equipped with detailed knowledge about their students and have a clear idea about what the students need to learn, differentiation can happen all the time" (p. 87). We agree. And we invite you to hone your practice of informed assessment to inform teaching and learning.