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Grading and Differentiation: Paradox or Good Practice?

Teachers often perceive an inherent conflict between “differentiated instruction,” which emphasizes attention to variance in students’ readiness levels, interests, and learning profiles, and “the grading system,” which seems to indicate a sort of rigidity and standardization. This article examines key principles of quality differentiation and of quality grading to determine whether the two facets of educational practice are compatible. It concludes that the perceived incompatibility stems from misunderstanding the essential principles of differentiation and grading, and from entrenched classroom habits that often run counter to guidance from experts in grading and in differentiation.

A PERENNIAL QUESTION RELATED to differentiation is, “How could I grade it?” Nearly always, the inquirer’s tone, facial expression, and follow-up suggest a longer sequence of thoughts something like the following. “I get that my stu-

dents differ in many ways. I get that they would likely learn better if what happened in the classroom worked for them. But at some point, I have to give grades—make out report cards—and at that point, my job is to separate the sheep from the goats. Isn’t this whole differentiation thing going to interfere with that part of my job?”

A colleague of mine is prone to begin her answer to the spoken or inferred puzzlement by saying that there is no inherent problem with the philosophy of differentiation and grading or reporting. Rather, the problems exist in how educators view and practice grading—even in the absence of differentiation.

The goal of this article is to examine ways in which grading might be conceived and carried out in a differentiated approach to teaching—and in accordance with recommended practices related to grading in general. Following introduction of key terms and assumptions, the article explores ways in which defensible grading systems and practices can mesh with goals and practices of defensible differentiation.

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Establishing Common Terms and Assumptions

Both the topic of grading and the topic of differentiation are the focus of scores of books, arti-

cles, and other materials. It is impossible in one relatively short piece to explore the complexities of either topic with any scope. Nonetheless, it is important to set out key terms and assumptions from both bodies of writing, to establish a framework for the consideration that follows in the article. Understanding the concepts “differentiated instruction” and “grading” is essential to exploring the interaction of the two.

“Differentiated instruction” is a philosophy of teaching purporting that students learn best when their teachers effectively address variance in students’ readiness levels, interests, and learning profile preferences. A key goal of differentiated instruction is maximizing the learning potential of each student (Tomlinson, 2001, 2003). There is no single “recipe” for differentiation. Nonetheless, there are certain heuristics or guides for differentiation, which, if followed, are likely to assist teachers in developing defensible and effective practice that responds to the needs of diverse learners.

“Grading” is the assignment of symbolic numbers or letters at the end of a specified period of time, that will serve as a summary statement of evaluations made of students (Marzano, 2000). The primary goal of grading is to provide high quality feedback to parents and students so they can clearly understand and appropriately use the information to support the learning process and encourage student success (Airasian, 1997; Guskey & Bailey, 2001; O’Connor, 2002). There is no single, right way to grade (O’Connor, 2002), but there are heuristics or guides for grading which, if followed, would better serve the purpose of providing interested individuals with useful information.

An examination of the key goals and principles of differentiation and those of grading establishes a framework for exploring ways in which the two aspects of educational practice might come together for a common purpose. I begin with an overview of key indicators and principles of quality differentiation, then examine key indicators and principles of quality grading, and ultimately look at how the two areas of educational practice not only might be, but ought to be, compatible.

Underpinnings of Effective Differentiation

Teachers who practice differentiated or responsive teaching work to ensure that: (a) learning environments are both safe and challenging for each student; (b) teaching and learning routines include whole class, small group, and individual attention; (c) learning goals are clearly designated and pursued to ensure focus on the essential knowledge, understanding, and skill in a topic or discipline; (d) preassessment and ongoing or formative assessment regularly inform teachers’ instructional plans; (e) teachers use time, space, materials, and instructional strategies in flexible ways to address varied learner needs; and (f) classrooms become communities of learning in which students share with the teacher responsibility for respect, optimum operation, and maximum individual growth. It is these aims that “define” or shape effective differentiation.

These aspects of differentiation have been detailed in other places (Tomlinson, 1999, 2003). Of particular importance to a discussion on differentiation and grading, however, are several cardinal principles of differentiation.

First, students’ attitudes about learning and about themselves as learners are of great importance in establishing, maintaining, and developing students’ commitment to the learning process. Practices contributing to positive student attitude about learning and themselves as learners merit teacher attention. Those practices that erode student attitude about learning and themselves as learners should be questioned. Attending to learning environment and student affect is not a matter of social work, but a pathway to support achievement (Tomlinson, 2003).

Second, differentiation must be an extension of high quality curriculum, not a replacement for it. A prime job of teachers is to ensure curriculum that engages students and helps all of them use, retain and retrieve, and make meaning of powerful ideas from the disciplines and the world around them. Students who struggle with school for a variety of reasons should particularly have their attention focused on the knowledge, ideas, and skills most likely to give them power to under-

stand the subject and to proceed in it. Advanced learners should find extended learning opportunities based not on random encounters with serendipitous tasks but rather on the essentials of the discipline that contribute to a progression toward expertise (Tomlinson et al., 2002).

Third, effective differentiation is not random. Rather, it is based on a clear cycle of: (a) articulating what is essential in a topic or discipline, (b) assessing a student's standing relative to those essentials, (c) providing feedback and adapting instruction to ensure that each student progresses in the most effective and efficient ways possible to master the essentials, (d) assessing outcomes, and (e) making additional adaptations as needed (Earl, 2003; Tomlinson, 1999; Tomlinson & McTighe, in press).

These three principles—as is the case with other principles of differentiation—emanate from the best understanding of psychology of teaching and learning, human differences, and how the brain learns. They also form an important intersection with key principles of effective grading.

Underpinnings of Effective Grading

Key features of effective grading practice stem both from an understanding of teaching and learning, as well as knowledge of psychometrics or measurement. They provide a compass to enhance the likelihood that the way teachers grade meets the goal of communicating clear, useful information for the purpose of enhancing learning. There are numerous guides for defensible grading practice. A few merit particular attention here because of their linkage with the key principles of differentiation and the search for an appropriate intersection between differentiation and grading.

First, grading is not a synonym for assessment. Assessment is gathering information about students' achievement for the purpose of making instructional decisions (Marzano, 2000). Grading is making an end-point judgment about students' achievement. Formative, or on-going, assessment should not all be graded. Its purpose is to help both teacher and student see how learning is progressing and to adjust as necessary to make sure learn-

ing stays on course. Grading on-going assessments can undermine student willingness to take mental risks, absorb an undue amount of teacher time, and contribute to a skewed view of what a student actually learns by the end of a particular cycle of learning (O'Connor, 2002).

Second, grades *should* be based on clearly specified learning criteria (Guskey & Bailey, 2001). The best reference system is likely criterion referenced; that is, charting the status of a student relative to a set of preestablished, clearly stated, content-specific learning goals (Marzano, 2000). Much confusion in grading and grading practice results from lack of clarity about what a particular grade represents. Currently, required standards would likely serve as the basis for grading criteria. When too many standards compromise clarity about achievement, teachers should organize the standards into meaningful strands (O'Connor, 2002).

Third, and related to principle two, grades should *not* be normative (Guskey & Bailey, 2001; Wiggins, 1993). Comparing students to others in the class rather than to criteria is counterproductive. Grading normatively, or on a curve, spawns unhealthy competition and diminishes motivation for nearly all students. Rather, grading should be criterion referenced. That is, educators should establish indicators of student success, describe the criteria by which they will evaluate student success, and measure student success accordingly.

Fourth, evidence used to grade students should be valid. A measure is valid if it measures what it is intended to measure and not extraneous factors. For instance, if a teacher wants to measure a student's understanding of, and ability to apply, a particular mathematical concept, he should be sure the student's score is not deflated by factors such as inability to speak English, impulsivity, difficulty in reading directions, slow pace of work, and so on. Similarly, we need to ensure that the student's grade is not inflated by factors such as neat hand writing or an attractive cover on the work (Guskey & Bailey, 2001).

Fifth, and related to principle four, it is important to do all one can to minimize "grade pollution" (O'Connor, 2002). A student's "observed grade" equals that student's "true score" plus "error"

(Marzano, 2000). In other words, there are many factors that can interfere with a student's opportunity to demonstrate what he or she actually knows, understands, and can do. Among those factors are poorly written task directions, student difficulty with reading or understanding the language of the task or test, a mismatch between key goals and the actual assessment instrument, narrow or rigid approaches to measuring understanding, low grades for missing homework, and so on. When such factors disguise what a student actually knows, "grade pollution" occurs. It is important to be aware of such variables and to reduce their impact on assessment outcomes. A grade should reveal as much as possible about what a student has actually learned and should not be obfuscated with a myriad of factors that serve as barriers to student demonstration of key proficiencies.

Although these are not the only important principles related to grading, these five do influence the quality of our grading practices and the capacity of grades to communicate clearly and in useful ways to important audiences. That is the case in both differentiated and nondifferentiated settings.

Principles of Differentiation and Grading Aligned?

To this point, it would seem that key principles governing grading and differentiated instruction are well aligned. For instance, in the literature of both domains, there is considerable attention paid to teachers ensuring clarity about precisely what students should know, understand, and be able to do. Both bodies of writing emphasize the foundational importance of a teacher knowing precisely where a student should "end up" at the conclusion of a segment of learning, teaching with those outcomes in the forefront of all instructional decisions, and making the criteria for success clear to students. Both stress using preassessment and ongoing assessment data to inform teacher and students of progress and need for additional progress. Both stress use of formative assessment data to make instructional adaptations that lead to greater success for more students. Both acknowledge the importance of ensuring that summative assess-

ment and grading are tightly aligned with the specified goals and criteria for success.

Even the grading principle of eliminating "grade pollution" echoes an important principle of differentiation. Differentiation suggests that it is critical for teachers to provide multiple routes to accomplishing specified goals, so that each learner can progress to the greatest degree possible. The differentiation argument is that most students can learn most things under the right circumstances. To know that they have removed barriers to academic growth for our students is part of the responsibility of professional educators.

Experts in the area of grading build from a very similar vantage point when they caution teachers to make every effort to give students opportunity to show what they know. Teachers should, the experts tell us, eliminate barriers to demonstrating achievement that might arise when an artificial barrier obstructs students' opportunity to express their learning.

In support of the principle of eliminating grade pollution, experts in grading admonish educators to attend to individual differences by giving students second chances to learn and show what they have learned, and to use time flexibly to measure the quality, rather than the speed, of a performance (O'Connor, 2002; Wiggins, 1993). They caution teachers to focus their attention on scores students earn later in a marking sequence rather than earlier because students need multiple opportunities to practice before they are expected to achieve important goals. Thus, early scores are likely to underestimate a student's true achievement, and averaging scores is likely to create grade pollution (Marzano, 2000; O'Connor, 2002).

A first examination of the two bodies of writing suggests that grading in a differentiated classroom should present little problem for educators. In such classrooms, teachers would: (a) be aware of and responsive to student differences; (b) specify clear learning outcomes; (c) use preassessment and formative assessment data to chart students' progress relative to the stated goals; (d) adapt instruction in a variety of ways to ensure, as much as possible, that each student continues to progress in regard to the learning goals; (e) make sure students know criteria for success on summative assess-

assessments, ensuring that the assessments are tightly aligned with the stated learning goals; and (f) provide varied forms of assessment to ensure that students have an unobstructed opportunity to express what they have learned.

Is the Coast Really Clear?

If it is the case that adhering to the principles of quality differentiation and quality grading are fully aligned, then it seems odd that grading in differentiated classrooms presents such a conundrum to many teachers. Perhaps there are areas of misalignment in the two aspects of classroom practice not evident at first consideration.

There are three questions that teachers ponder related to differentiation and grading. These questions merit examination to determine compatibility between defensible grading practices and differentiation. The three questions are: “What does it mean to be ‘fair’ in a classroom?” “What role does grading play in motivating academically diverse learners?” and “How might reporting of grades work so that they both communicate accurately and contribute to positive student motivation?”

“Fair” in Differentiation and Grading

A philosophy of responsive instruction suggests that “fairness” in academically diverse settings is best conceived not as treating everyone alike, but working to ensure that each student has the support he or she needs to succeed (Tomlinson, 2003). Thus the teacher develops varied approaches to teaching and learning, and varied modes of expressing learning to maximize each learner’s access to success. In other words, differentiation stresses removal of barriers to learning.

Experts in grading make similar arguments—although perhaps for somewhat different reasons—when they admonish teachers to use formative or in-process assessments as a means of giving feedback for practice rather than moving too quickly to grading. To grade everything a student does early in the learning process, they say, is to inject error into the process.

Further, both aspects of practice note the importance of providing multiple modes of assessment and flexible use of time when the time comes for summative or evaluative assessments. From the vantage point of differentiation, such efforts enhance the opportunity for success for a wider range of students. From the vantage point of grading, such efforts enhance the likelihood of demonstrating what a student really knows, understands, and can do. It cuts down on grade pollution.

From the perspective of quality grading, there is nothing unfair about providing multiple pathways and support systems for learning. What matters is ensuring clarity and stability in criteria we will use to teach, construct assessments, and measure success.

Motivation in Differentiation and Grading

The issue of nurturing positive student motivation to learn is a core concern in differentiated or responsive teaching. Again, the topic of motivation and achievement is complex, and cannot be fully addressed here. In brief, positive classroom environment, balance of challenge and safety, sense of community, student acceptance of responsibility for personal growth, shared responsibility for effective classroom routines, and certainly achievement are all threatened if student motivation is impaired—by grading practices or otherwise. Among motivation-related issues of practitioners of differentiation are the following:

1. Students whose school histories have caused them to believe that success is out of their reach and control will likely either give up on themselves or on school. In either case, they cease to invest significant and prolonged effort in learning.
2. Students whose school histories have caused them to believe that excellence can be achieved with minimal effort do not learn to expend effort, and yet perceive that high grades are an entitlement for them.
3. Students who learn predominately from mastery motivation (the satisfaction of learning) rather than from a performance motivation (for

grades) are likely to be more effective learners over the long haul.

4. Helping students assume responsibility for their own growth, measured against clearly defined goals, rather than competing against peers assists in building positive student motivation to learn.

5. Providing learning opportunities that are appropriately challenging for individuals, that are interesting and relevant to individuals, and that allow individuals to learn in ways that work for them facilitates positive student motivation to learn.

6. Acknowledging student growth or progress in regard to academic goals facilitates positive student motivation to learn, and is important in helping students adopt the practice of doing one's best. A major report on motivating students to learn advises educators to set goals for each child that can be achieved with high effort and acknowledge the attainment (Office of Educational Research and Improvement, 1992).

Thus, a philosophy of differentiation advises that: (a) Positive motivation to learn is an important factor in student success; (b) effort is necessary for achievement and stems, in part, from motivation to learn; (c) each learner must grow academically from his or her own point of readiness; (d) teachers should provide opportunity and support for students to grow from their own starting points toward increasing competence with specified learning goals; and (e) acknowledging student growth is important for continuing development of positive student motivation and student expenditure of effort. If recommended grading practices ran counter to these goals, there would, indeed, be a conflict between the two aspects of the classroom.

Although central to a philosophy of differentiation, experts in the area of grading also address the issue of student motivation as it relates to grading practice.

For some students, the certainty of praise and success ... has become a drug; they continually need more. For many other students, year after year of 'not good enough' has eroded their intellectual self-

confidence and resulted in a kind of mind-numbing malaise. (Earl, 2003, pp. 72, 76)

Thus, the experts in grading remind one that competitive or norm-based grading erodes motivation to learn for many students—including those who struggle and those who are advanced (Azwell & Schmar, 1995; Office of Educational Research and Improvement, 1992). They note that desire to learn is a more preferable motivator than earning grades (Earl, 2003; Wiggins, 1993). They remind us that using formative assessment for corrective feedback rather than grading is likely to be a positive motivator for students (Azwell & Schmar, 1995; Guskey & Bailey, 2001). They caution that effective grading practices require an "overriding concern for students" and that grading practices should "be a positive and beneficial aspect of students' learning experiences" (Guskey & Bailey, 2001, p. 194). They caution that concern for grades should not pervert learning or damage motivation to learn (O'Connor, 2002).

It is interesting that experts in grading also raise a belief shared with differentiation that if educators taught students in ways that worked for them, educators should expect a "normal curve" to disappear. That is, if they taught for the success of every student, they would not accept the premise that some students must be winners and others must be losers. Teaching for success rejects that there must be a bell-shaped curve of rewards and punishments rather than assuming that many students can achieve proficiency with hard work and appropriate support (O'Connor, 2002; Wiggins, 1993).

Reporting Grades in a Differentiated Classroom

If the fundamental principles of grading and differentiation are not in conflict, and if issues related to fairness and motivation are not oppositional in grading and differentiation, perhaps the perceived conflict in the two areas occurs at the point of reporting grades—in other words, when it is report card time. Next, I examine that possibility.

Quality differentiation has a core focus on ensuring that each student in a diverse array of learners maintains a focus on personal growth to enhance motivation to learn and effort necessary to learn. Quality grading has a core focus on accurate communication of valid information. The question becomes, “Is it possible to report student grades in a way that promotes individual growth and still maintains validity and accuracy?”

Here, too, the answer is yes. There is no inherent conflict in the goals of quality grading and the goals of quality differentiation. Experts in the area of grading suggest that society develop “reporting systems” rather than only “report cards” as means of conveying multiple messages about a student’s learning. Their driving caution is that teachers not “blend” the messages, thus damaging clarity and usefulness of information (O’Connor, 2002; Wiggins, 1993).

In other words, one might think in terms of reporting academic achievement related to a set of clearly defined criteria, plus individual growth along a continuum of clearly defined criteria, plus effort (Guskey & Bailey, 2001; Marzano, 2000). Such multifaceted reporting can provide information about a student’s standing relative to criteria designated as important for a particular class, about that student’s degree of progress from the start of the marking period, and about student work habits—three distinct but potentially important messages for students and their parents. In regard to reporting progress as one category of information about a learner, some noted authors have suggested that if learning is assessed using a well-defined set of learning outcomes or standards, progress can be both measured and communicated (Guskey & Bailey, 2001).

Again, the caveat posed by experts in grading is that teachers not combine the three aspects into a single grade, eroding grade validity and clarity of communication. A helpful analogy compares this sort of multipart reporting system to a doctor’s reporting of vital signs. There is important information in “scores” of blood pressure, cholesterol, and pulse rate. The doctor will share all three pieces of information, but will not average them (O’Connor, 2002). Presumably it would also be of use (motivating) to a patient to know that his blood pressure

has improved since previous visits, although it is not yet in an ideal range.

For students with Individual Education Plans (IEPs), achievement reports may need to reflect IEP goals, rather than criteria established for the class as a whole. In such cases, report cards can make note of that fact and state the criteria for measuring academic achievement for the student. Report cards can also include statements that advanced students have worked beyond course requirements, specifying the extended learning goals the student has achieved. If report cards do not allow for reporting of achievement, progress, and work habits, it is possible to communicate all three facets of student development via attachments to the report card, separate communications, checklists, student-parent conferences, etc. In all such instances, clarity about criteria and consistent application of specified criteria are of great importance (Guskey & Bailey, 2001).

Thus, reporting systems have the flexibility to provide information that can be important to the instruction, motivation, and achievement of academically diverse populations in differentiated classrooms and still adhere to the principles of defensible grading. What seems a tacit conflict between grading and differentiation does not have to persist.

Barriers More Imagined Than Real

The barriers that have been mentally erected that use grading as a necessary impediment to differentiation do not exist if one carefully implements one’s best guidance on defensible grading procedures. Rather, it is likely that the barriers stem from a combination of misperceptions about quality differentiation, misperceptions about quality grading, and habitual practice of one-size-fits-all instruction coupled with intractable beliefs about grading.

It is possible to change one’s attitudes and practices regarding instruction and grading so that teaching both serves diverse learners more effectively and communicates information about their learning more accurately and usefully. Grading and reporting are, after all, an integral

part of the instructional process, and have as a goal providing information that enhances the teaching and learning process for each student (Guskey & Bailey, 2001).

Earl (2003) reminds that any change in schools is a kind of “creeping incrementalism” (p. 15). Teachers modify their practice not by sweeping change but step by step, in small ways, as they reflect on their practice and will themselves to grow. Perhaps educators are not so different from their students—learners who have their own starting points, and who need to measure their success according to essential goals (in this instance, the principles of differentiation and grading), persistent effort, and progress toward their goals.

References

- Airasian, P. (1997). *Classroom assessment* (3rd Ed.). New York: McGraw-Hill.
- Azwell, T., & Schmar, E. (1995). *Report card on report cards: Alternatives to consider*. Portsmouth, NH: Heinemann.
- Earl, L. (2003). *Assessment as learning: Using classroom assessment to maximize student learning*. Thousand Oaks, CA: Corwin.
- Guskey, T., & Bailey, J. (2001). *Developing grading and reporting systems for student learning*. Thousand Oaks, CA: Corwin.
- Marzano, R. (2000). *Transforming classroom grading*. Alexandria, VA: Association for Supervision and Curriculum Development.
- O'Connor, K. (2002). *How to grade for learning: Linking grades to standards* (2nd ed). Arlington Heights, IL: Skylight.
- Office of Educational Research and Improvement. (1992). *Hard work and high expectations: Motivating students to learn*. Washington, DC: U.S. Department of Education.
- Tomlinson, C. (1999). *The differentiated classroom: Responding to the needs of all learners*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Tomlinson, C. (2001). *How to differentiate instruction in mixed-ability classrooms* (2nd ed.). Alexandria, VA: Association for Supervision and Curriculum Development.
- Tomlinson, C. (2003). *Fulfilling the promise of the differentiated classroom: Tools and strategies for responsive teaching*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Tomlinson, C., Kaplan, S., Renzulli, J., Purcell, J., Leppien, J., & Burns, D. (2002). *The Parallel Curriculum Model: A design to develop high potential and challenge high-ability learners*. Thousand Oaks, CA: Corwin.
- Tomlinson, C., & McTighe, J. (in press). *Understanding by design and differentiated instruction: Two models for student success*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Wiggins, G. (1993). *Assessing student performance*. San Francisco: Jossey-Bass.



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