

Grading and Reporting Student Learning

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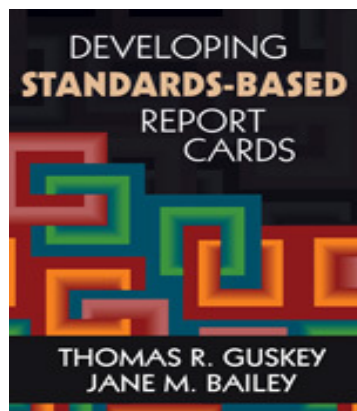
Dr. Guskey is Professor of Educational Psychology in the College of Education at the University of Kentucky, and widely known for his research in education reform, professional development, assessment, and grading. A graduate of the University of Chicago, he began his career as a middle school teacher, served as an administrator in Chicago Public Schools, and was the first Director of the *Center for the Improvement of Teaching and Learning*, a national educational research center. His books have won numerous awards and his articles have appeared in prominent research journals as well as *Educational Leadership*, *Kappan*, and *School Administrator*. Dr. Guskey served on the Policy Research Team of the *National Commission on Teaching & America's Future*, on the Task Force to develop the *National Standards for Staff Development*, and recently was named a Fellow in the American Educational Research Association. He co-edits *the Experts in Assessment Series* for Corwin Press and has been featured on the National Public Radio programs "Talk of the Nation" and "Morning Edition." As a consultant to schools throughout the world, he helps bring clarity and insight to some of education's most complex problems.

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Developing Standards-Based Report Cards

by Thomas R. Guskey & Jane M. Bailey



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Awards:

2010 Association of Educational Publishers Distinguished Achievement Award Finalist

"Guskey and Bailey offer realistic solutions to improving how educators communicate a student's academic progress to all stakeholders. Their work provides a faculty with the research, step-by-step guidelines, and reporting templates to begin the dialogue to develop a standards-based report card. Without a doubt, this work is a model for schools that want to improve their system of grading and reporting. It certainly has transformed ours!"

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Develop standards-based report cards that are meaningful to students, parents, and educators!

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A standards-based report card breaks down each subject area into specific elements of learning to offer parents and educators a more thorough description of each child's progress toward proficiency. This accessible volume:

- Provides a clear framework for developing standards-based report cards
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Filled with examples of standards-based report cards that can be adapted to a school's needs, this practical resource shows district and school administrators how to establish reporting practices that facilitate learning.

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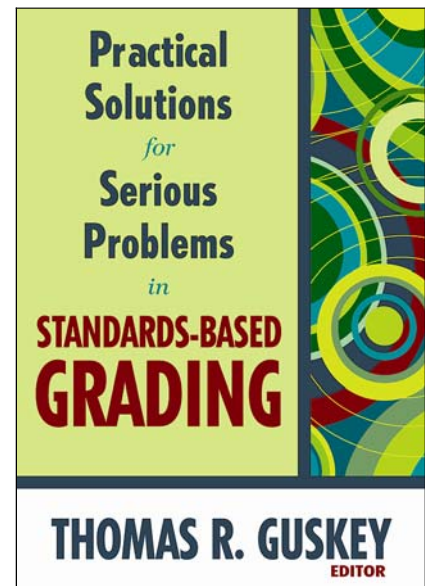
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HOW'S MY KID DOING?

A PARENT'S GUIDE TO GRADES, MARKS, AND REPORT CARDS



THOMAS R. GUSKEY

How's My Kid Doing?

A Parent's Guide to Grades, Marks, & Report Cards

By

Thomas R. Guskey

Over the years, Tom Guskey is the teacher from whom I have learned the most about the principles of effective communication. He has consistently analyzed and articulated our communication options with immense clarity. He's done it again, this time for parents.

**-Rick Stiggins, President
Assessment Training Institute, Oregon**

ABOUT THE BOOK:

Most parents want schools to provide honest, clear, and explicit information on how their child is doing – with specific suggestions for improvement. Unfortunately, most schools are providing “progress reports” that parents find vague, confusing, inconsistent, and delivered in unfamiliar formats. *How's My Kid Doing* helps parents make sense of their child's grades, test scores, and report cards by explaining the advantages and shortcoming of different reporting methods. It answers parents' most frequently asked questions about plus and minus grades, grading on the curve, standards, and narrative evaluations. And, it offers strategies for working with teachers and with children to improve the system. Most important, it illustrates how educators and parents can become true partners in a child's learning.

ABOUT THE AUTHOR:

THOMAS R. GUSKEY is professor of education at the University of Kentucky, Lexington. He is a frequent speaker at national education conferences, and a leading expert on the topics of grading, assessment, and professional development in education.

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***Questionnaires
and
Activities***

GRADING AND REPORTING QUESTIONNAIRE

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Name (Optional) _____ Grade Level _____

Years of Teaching Experience _____ Subject(s) _____

Directions: *Please read each question carefully, think about your response, and answer each as honestly as you can.*

1. What do you believe are the major reasons we use report cards and assign grades to students' work?

- a. _____
- b. _____

2. Ideally, what purposes do you believe report cards or grades should serve?

- a. _____
- b. _____

3. Although classes certainly differ, on average, what percent of the students in your classes receive the following grades:

A ____ B ____ C ____ D ____ E or F ____

4. What would you consider an ideal distribution of grades (in percent) in your classes?

A ____ B ____ C ____ D ____ E or F ____

5. The current grading system in many schools uses the following combination of letter grades, percentages, and/or categories:

A	100% - 90%	Excellent	Exceptional
B	89% - 80%	Good	Proficient
C	79% - 70%	Average	Basic
D	69% - 60%	Poor	Below Basic
E or F	59% -	Failing	

If you could make any changes in this system, what would they be?

- a. _____
- b. _____

6. Is there an established, uniform grading policy in your school or district?

Yes ____ No ____ I don't know ____

How well would you say you understand those policies?

Not at all Somewhat Very well
1 ----- 2 ----- 3 ----- 4 ----- 5

7. Grades and other reporting systems serve a variety of purposes. Based on your beliefs, rank order the following purposes from 1 (Most important) to 6 (Least important).

- ___ Communicate information to parents about students' achievement and performance in school
- ___ Provide information to students for self-evaluation
- ___ Select, identify, or group students for certain educational programs (Honor classes, etc.)
- ___ Provide incentives for students to learn
- ___ Document students' performance to evaluate the effectiveness of school programs
- ___ Provide evidence of students' lack of effort or inappropriate responsibility

8. Teachers use a variety of elements in determining students' grades. Among those listed below, please indicate those that you use and about what percent (%) each contributes to students' grades.

- | | |
|-------------------------------------|--------------------------------|
| ___ Major examinations | ___ Oral presentations |
| ___ Major compositions | ___ Homework completion |
| ___ Unit tests | ___ Homework quality |
| ___ Class quizzes | ___ Class participation |
| ___ Reports or projects | ___ Work habits and neatness |
| ___ Student portfolios | ___ Effort put forth |
| ___ Exhibits of students' work | ___ Class attendance |
| ___ Laboratory projects | ___ Punctuality of assignments |
| ___ Students' notebooks or journals | ___ Class behavior or attitude |
| ___ Classroom observations | ___ Progress made |
| ___ Other (Describe) _____ | |
| ___ Other (Describe) _____ | |

9. What are the most positive aspects of report cards and the process of assigning grades?

10. What do you like least about report cards and the process of assigning grades?

Grading Formulae: What Grade Do Students Deserve?

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The table below shows the performance of seven students over five instructional units. Also shown are the summary scores and grades for these students calculated by three different methods: (1) the simple arithmetic average of unit scores, (2) the median or middle score from the five units, and (3) the arithmetic average, deleting the lowest unit score in the group.

Consider, too, the following explanations for these score patterns:

Student 1 struggled in the early part of the marking period but continued to work hard, improved in each unit, and did excellently in unit 5.

Student 2 began with excellent performance in unit 1 but then lost motivation, declined steadily during the marking period, and received a failing mark for unit 5.

Student 3 performed steadily throughout the marking period, receiving three *B*'s and two *C*'s, all near the *B* – *C* cut-score.

Student 4 began the marking period poorly, failing the first two units, but with newfound interest performed excellently in units 3, 4, and 5.

Student 5 began the marking period excellently, but then lost interest and failed the last two units.

Student 6 skipped school (unexcused absence) during the first unit, but performed excellently in every other unit.

Student 7 performed excellently in the first four units, but was caught cheating on the assessment for unit 5, resulting in a score of zero for that unit.

Summary Grades Talled by Three Different Methods

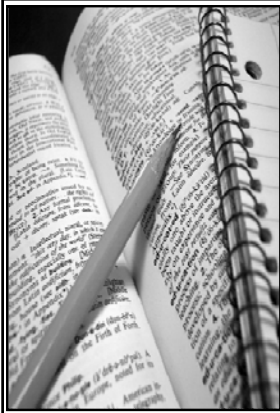
Student	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Average Score	Grade	Median Score	Grade	Deleting Lowest	Grade
1	59	69	79	89	99	79.0	C	79.0	C	84.0	B
2	99	89	79	69	59	79.0	C	79.0	C	84.0	B
3	77	80	80	78	80	79.0	C	80.0	B	79.5	C
4	49	49	98	99	100	79.0	C	98.0	A	86.5	B
5	100	99	98	49	49	79.0	C	98.0	A	86.5	B
6	0	98	98	99	100	79.0	C	98.0	A	98.8	A
7	100	99	98	98	0	79.0	C	98.0	A	98.8	A

Grading standards: 90% – 100% = A
 80% – 89% = B
 70% – 79% = C
 60% – 69% = D
 – 59% = F

Questions: Which grading method is best? Which is fairest?

What grade does each student deserve?

Copies of Slides



Grading and Reporting Student Learning

Thomas R. Guskey



Grading and Reporting Guiding Questions

Guiding Questions

1. What are the major reasons we use report cards and assign grades to students' work?
2. Ideally, what purposes should report cards or grades serve?
3. What elements should teachers use in determining students' grades?
(For example, major assessments, compositions, homework, attendance, class participation, etc.)

Purposes of Grading

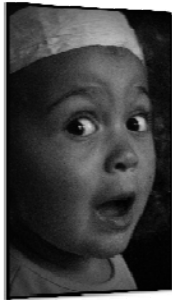
1. Communicate the Achievement Status of Students to Their Parents and Others
2. Provide Information for Student Self-Evaluation
3. Select, Identify, or Group Students for Certain Educational Programs
4. Provide Incentives for Students to Learn
5. Document Students' Performance to Evaluate the Effectiveness of Instructional Programs
6. Provide Evidence of Students' Lack of Effort or Inappropriate Responsibility

Grading Elements

- | | |
|-----------------------------------|------------------------------|
| ✓ Major Exams or Compositions | ✓ Homework Completion |
| ✓ Class Quizzes | ✓ Homework Quality |
| ✓ Reports or Projects | ✓ Class Participation |
| ✓ Student Portfolios | ✓ Work Habits and Neatness |
| ✓ Exhibits of Students' Work | ✓ Effort Put Forth |
| ✓ Laboratory Projects | ✓ Class Attendance |
| ✓ Students' Notebooks or Journals | ✓ Punctuality of Assignments |
| ✓ Classroom Observations | ✓ Class Behavior or Attitude |
| ✓ Oral Presentations | ✓ Progress Made |

General Conclusions from the Research on Grading

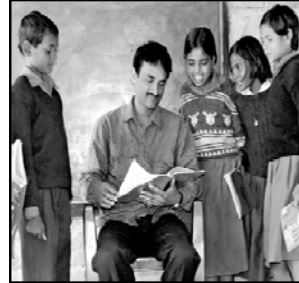




#1 Grading is *NOT* Essential to the Instructional Process

- ✓ Teachers can teach without grades.
- ✓ Students can and do learn without grades.

Checking *is* Essential !



- Checking is Diagnostic
 - Teacher is an *Advocate*
- Grading is Evaluative
 - Teacher is a *Judge*



#2 No One Method of Grading and Reporting Serves *All* Purposes Well !

Purposes of Grading

1. Communicate the Achievement Status of Students to Their Parents and Others
2. Provide Information for Student Self-Evaluation
3. Select, Identify, or Group Students for Certain Educational Programs
4. Provide Incentives for Students to Learn
5. Document Students' Performance to Evaluate the Effectiveness of Instructional Programs
6. Provide Evidence of Students' Lack of Effort or Inappropriate Responsibility

Architecture:

Form *Follows* Function.

Education:

Method *Follows* Purpose!



Solution:

Multiple Purposes Require a ***Multi-Faceted, Comprehensive Reporting System!***



Letter Grades

- ➔ **Advantages:**
 1. Brief Description of Adequacy
 2. Generally Understood
- ➔ **Disadvantages:**
 1. Require the Abstraction of Lots of Information
 2. Cut-offs are Arbitrary
 3. Easily Misinterpreted

Percentage Grades

- ➔ **Advantages:**
 1. Provide Finer Discriminations
 2. Increase Variation in Grades
- ➔ **Disadvantages:**
 1. Require the Abstraction of Lots of Information
 2. Increased Number of Arbitrary Cut-offs
 3. Greater Influence of Subjectivity

Standards-Based (Checklist of Skills)

- ➔ **Advantages:**
 1. Clear Description of Achievement
 2. Useful for Diagnosis and Prescription
- ➔ **Disadvantages:**
 1. Often Too Complicated for Parents to Understand
 2. Seldom Communicate the Appropriateness of Progress

Steps in Developing Standards-Based Grading

1. **Identify the major learning goals or standards** that students will be expected to achieve at each grade level or in each course of study.
2. **Establish performance indicators** for the learning goals or standards.
3. **Determine graduated levels of performance** (benchmarks) for assessing each goal or standard.
4. **Develop reporting forms** that communicate teachers' judgments of students' learning progress and culminating achievement in relation to the learning goals or standards.

Crucial Development Questions

1. What is the purpose of the report card?
2. How often will report cards be completed and sent home?
3. Will a specific report card be developed for each grade level, or will a more general report card be used across several grade levels?
4. How many standards will be included for each subject area or course?
5. What specific standards will be reported at each grade level or in each course?
6. Will standards be set for the grade level or each marking period?
7. What product, process, and progress standards should be reported?

Crucial Development Questions

8. How many levels of performance will be reported for each standard?
9. How will the levels be labeled?
10. Will teachers' comments be included and encouraged?
11. How will information be arranged on the report?
12. What are parents expected to do with this information?
13. What are students expected to do with this information?
14. What policies need to accompany the new reporting procedures?
15. When should input of parents and/or students be sought?

Challenges in Determining Graduated Levels of Student Performance

- Levels of Understanding / Quality

Modest	Beginning	Novice	Unsatisfactory
Intermediate	Progressing	Apprentice	Needs Improvement
Proficient	Adequate	Proficient	Satisfactory
Superior	Exemplary	Distinguished	Outstanding
- Level of Mastery / Proficiency

Below Basic	Below Standard	Pre-Emergent	Incomplete
Basic	Approaching Standard	Emerging	Limited
Proficient	Meets Standard	Acquiring	Partial
Advanced	Exceeds Standard	Extending	Thorough
- Frequency of Display

Rarely	Never
Occasionally	Seldom
Frequently	Usually
Consistently	Always
- Degree of Effectiveness

Ineffective	Poor
Moderately Effective	Acceptable
Highly Effective	Excellent
- Evidence of Accomplishment

Little or No Evidence
Partial Evidence
Sufficient Evidence
Extensive Evidence

Narratives

➔ Advantages:

- Clear Description of Progress and Achievement
- Useful for Diagnosis and Prescription

➔ Disadvantages:

- Extremely Time-Consuming for Teachers to Develop
- May Not Communicate Appropriateness of Progress
- Comments Often Become Standardized

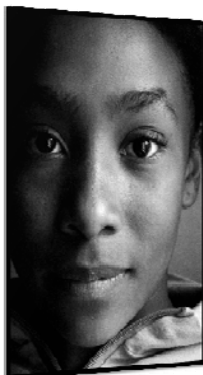
Methods can be Combined to Enhance their Communicative Value !



Grades with Comments are better than Grades Alone!

Grade	Standard Comment
A	Excellent ! Keep it up.
B	Good work. Keep at it.
C	Perhaps try to do still better?
D	Let's bring this up.
F	Let's raise this grade !

From: Page, E. B. (1958). Teacher comments and student performance: A seventy-four classroom experiment in school motivation. *Journal of Educational Psychology*, 49, 173-181.



Solution:

- Determine the Purpose of each Grading and Reporting Tool.
- Select the Most Appropriate Method for Each Tool.
- Develop a *Multi-Faceted, Comprehensive Reporting System!*

#3 Grading and Reporting Will Always Involve Some Degree of Subjectivity !



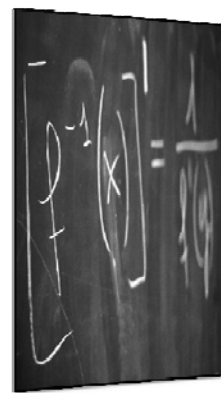
In General, Reporting is *More* Subjective:

- ✓ The More *Detailed* the Reporting Method.
- ✓ The More *Analytic* the Reporting Process.
- ✓ The More '*Effort*' is Considered.
- ✓ The More '*Behavior*' Influences Judgments.

**However, More
Detailed and *Analytic*
Reports are Better
Learning Tools !**

Challenge:

**To Balance
Reporting Needs
with *Instructional*
Purposes**



**#4 Mathematic
Precision
Does *NOT* Yield
Fairer or *More*
Objective
Grading!**

Student Achievement Profiles:

- Student 1** struggled in the early part of the marking period but continued to work hard, improved in each unit, and did excellently in unit 5.
- Student 2** began with excellent performance in unit 1 but then lost motivation, declined steadily during the marking period, and received a failing mark for unit 5.
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- Student 7** performed excellently in the first four units, but was caught cheating on the assessment for unit 5, resulting in a score of zero for that unit.

Grading Formulae

Student	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Average Score	Grade	Median Score	Grade	Deleting Lowest	Grade
1	59	69	79	89	99	79.0	C	79.0	C	84.0	B
2	99	89	79	69	59	79.0	C	79.0	C	84.0	B
3	77	80	80	78	80	79.0	C	80.0	B	79.5	C
4	49	49	98	99	100	79.0	C	98.0	A	86.5	B
5	100	99	98	49	49	79.0	C	98.0	A	86.5	B
6	0	98	98	99	100	79.0	C	98.0	A	98.8	A
7	100	99	98	98	0	79.0	C	98.0	A	98.8	A



Questionable Practices:

- ✓ **Averaging to Obtain a Course Grade**
- ✓ **Giving Zeros for Work Missed or Turned in Late**
- ✓ **Taking Credit Away from Students for Infractions**

Alternatives to Averaging Inconsistent Evidence on Student Learning:

- ✓ **Give priority to the most recent evidence.**
- ✓ **Give priority to the most comprehensive evidence.**
- ✓ **Give priority to evidence related to the most important learning goals or standards.**

Alternatives to Giving Zeros :

- ✓ **Assign "I" or "Incomplete" Grades.**
Include specific and immediate consequences.
- ✓ **Report Behavioral Aspects Separately.**
Separate "Product" (Achievement) from "Process" and "Progress."
- ✓ **Change Grading Scales.**
Use Integers (A=4, B=3, C=2, ...) instead of Percentages.

Grading requires
Thoughtful and Informed
Professional
Judgment!



#5 Grades have Some
Value as *Rewards*,
but *NO* Value as
Punishments !

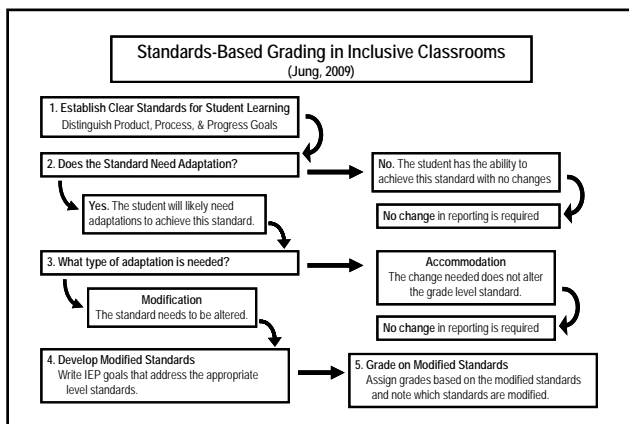
Message:
Do Not Use
Grades as
Weapons !



#6 Grading and Reporting should *Always* be done in reference to *Learning Criteria*, Never “On The Curve”

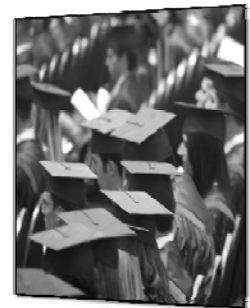
Grading Criteria

- 1. *Product Criteria***
- 2. *Process Criteria***
- 3. *Progress Criteria***



#7 Grade Distributions Reflect *Both*:

- ✓ **Students' Level of Performance**
- ✓ **The Quality of the Teaching**



#8 High Percentages are *NOT* the same as High Standards!



#9 Report Cards are but *One Way* of Communicating with Parents !

Forms of Reporting to Parents Include:

- ✓ Report Cards
- ✓ Notes with Report Cards
- ✓ Standardized Assessment Reports
- ✓ Weekly / Monthly Progress Reports
- ✓ Phone Calls
- ✓ School Open Houses
- ✓ Newsletters
- ✓ E-mail
- ✓ Personal Letters
- ✓ Homework
- ✓ Evaluated Assignments or Projects
- ✓ Portfolios or Exhibits
- ✓ School Web Pages
- ✓ Homework Hotlines
- ✓ Parent-Teacher Conferences
- ✓ Student-Led Conferences

In Reporting to Parents:

1. Include *Positive Comments*.
2. Describe *Learning Goals or Expectations* (Include Samples of the Student's Work).
3. Provide *Suggestions* on What Parents Can Do To Help.
4. Stress *Parents' Role as Partners* in the Learning Process.



Guidelines for Better Practice



#1 Begin with a Clear Statement of Purpose

- ✓ Why Use Grading and Reporting?
- ✓ For Whom is the Information Intended?
- ✓ What are the Desired Results?



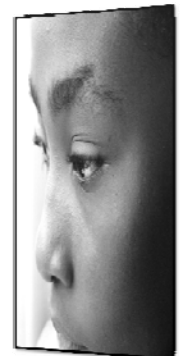
#2 Provide Accurate and Understandable Descriptions of Student Learning

- ✓ More a Challenge in Effective Communication
- ✓ Less an Exercise in Quantifying Achievement



#3 Use Grading and Reporting to Enhance Teaching and Learning

- ✓ Facilitate Communication
- ✓ Improve Efforts to Help Students





*An Important
Distinction:*

**Managers know
how to do
things right.**

**Leaders know
the right things
to do!**

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Readings



November 2011 | Volume 69 | Number 3
Effective Grading Practices | Pages 16-21

Five Obstacles to Grading Reform

Thomas R. Guskey

Education leaders must recognize obstacles to grading reform that are rooted in tradition—and then meet them head on.

Education improvement efforts over the past two decades have focused primarily on articulating standards for student learning, refining the way we assess students' proficiency on those standards, and tying results to accountability. The one element still unaligned with these reforms is grading and reporting. Student report cards today look much like they looked a century ago, listing a single grade for each subject area or course.

Educators seeking to reform grading must combat five long-held traditions that stand as formidable obstacles to change. Although these traditions stem largely from misunderstandings about the goals of education and the purposes of grading, they remain ingrained in the social fabric of our society.

Obstacle 1: Grades should provide the basis for differentiating students.

This is one of our oldest traditions in grading. It comes from the belief that grades should serve to differentiate students on the basis of demonstrated talent. Students who show superior talent receive high grades, whereas those who display lesser talent receive lower grades.

Although seemingly innocent, the implications of this belief are significant and troubling. Those who enter the profession of education must answer one basic, philosophical question: Is my purpose to *select* talent or *develop* it? The answer must be one or the other because there's no in-between.

If your purpose as an educator is to *select* talent, then you must work to maximize the differences among students. In other words, on any measure of learning, you must try to achieve the greatest possible variation in students' scores. If students' scores on any measure of learning are clustered closely together, discriminating among them becomes difficult, perhaps even impossible. Unfortunately for students, the best means of maximizing differences in learning is poor teaching. Nothing does it better.

Assessments also play a role. Assessments used for selection purposes, such as college entrance examinations like the ACT and SAT, are designed to be instructionally insensitive (Popham, 2007). That is, if a particular concept is taught well and, as a result, most students answer an assessment item related to that concept correctly, it no longer discriminates among students and is therefore eliminated from the assessment. These types of assessments maximize differences among students, thus facilitating the selection process.

If, on the other hand, your purpose as an educator is to *develop* talent, then you go about your work differently. First, you clarify what you want students to learn and be able to do. Then you do everything possible to ensure that *all* students learn those things well. If you succeed, there should be little or no variation in measures of student learning. All students are likely to attain high scores on measures of achievement, and all might receive high grades. If your purpose is to develop talent, this is what you strive to accomplish.

Obstacle 2: Grade distributions should resemble a normal bell-shaped curve.

The reasoning behind this belief goes as follows: If scores on intelligence tests tend to resemble a normal bell-shaped curve—and intelligence is clearly related to achievement—then grade distributions should be similar.

A true understanding of normal curve distributions, however, shows the error in this kind of reasoning. The normal bell-shaped curve describes the distribution of randomly occurring events *when nothing intervenes*. If we conducted an experiment on crop yield in agriculture, for example, we would expect the results to resemble a normal curve. A few fertile fields would produce a high yield; a few infertile fields would produce a low yield; and most would produce an average yield, clustering around the center of the distribution.

But if we intervene in that process—say we add a fertilizer—we would hope to attain a very different distribution of results. Specifically, we would hope to have all fields, or nearly all, produce a high yield. The ideal result would be for all fields to move to the high end of the distribution. In fact, if the distribution of crop yield after our intervention still resembled a normal bell-shaped curve, that would show that our intervention had failed because it made no difference.

Teaching is a similar intervention. It's a purposeful and intentional act. We engage in teaching to attain a specific result—that is, to have all students, or nearly all, learn well the things we set out to teach. And just like adding a fertilizer, if the distribution of student learning after teaching resembles a normal bell-shaped curve, that, too, shows the degree to which our intervention failed. It made no difference.

Further, research has shown that the seemingly direct relationship between aptitude or intelligence and school achievement depends on instructional conditions, *not* a normal distribution curve (Hanushek, 2004; Hershberg, 2005). When the instructional quality is high and well matched to students' learning needs, the magnitude of the relationship between aptitude/intelligence and school achievement diminishes drastically and approaches zero (Bloom, 1976; Bloom, Madaus, & Hastings, 1981).

Obstacle 3: Grades should be based on students' standing among classmates.

Most parents grew up in classrooms where their performance was judged against that of their peers. A grade of *C* didn't mean you had reached Step 3 in a five-step process to mastery or proficiency. It meant "average" or "in the middle of the class." Similarly, a high grade did not necessarily represent excellent learning. It simply meant that you did better than most of your classmates. Because most parents experienced such norm-based grading procedures as children, they see little reason to change them.

But there's a problem with this approach: Grades based on students' standing among classmates tell us nothing about how well students have learned. In such a system, all students might have performed miserably, but some simply performed less miserably than others.

In addition, basing grades on students' standing among classmates makes learning highly competitive. Students must compete with one another for the few scarce rewards (high grades) to be awarded by teachers. Doing well does not mean learning excellently; it means outdoing your classmates. Such competition damages relationships in school (Krumboltz & Yeh, 1996). Students are discouraged from cooperating or helping one another because doing so might hurt the helper's chance at success. Similarly, teachers may refrain from helping individual students because some students might construe this as showing favoritism and biasing the competition (Gray, 1993).

Grades must always be based on clearly specified learning criteria. Those criteria should be rigorous, challenging, and transparent. Curriculum leaders who are working to align instructional programs with the newly developed common core state standards move us in that direction. Grades based on specific learning criteria have direct meaning; they communicate what they were intended to communicate.

Obstacle 4: Poor grades prompt students to try harder.

Although educators would prefer that motivation to learn be entirely intrinsic, evidence indicates that grades and other reporting methods affect student motivation and the effort students put forth (Cameron & Pierce, 1996). Studies show that most students view high grades as positive recognition of their success, and some work hard to avoid the consequences of low grades (Haladyna, 1999).

At the same time, no research supports the idea that low grades prompt students to try harder. More often, low grades prompt students to withdraw from learning. To protect their self-images, many students regard the low grade as irrelevant or meaningless. Others may blame themselves for the low grade but feel helpless to improve (Selby & Murphy, 1992).

Recognizing the effects on students of low grades, some schools have initiated policies that eliminate the use of failing grades altogether. Instead of assigning a low or failing grade, teachers assign an *I*, or incomplete, with immediate consequences. Students who receive an *I* may be required to attend a special study session *that day* to bring their performance up to an acceptable level—and no excuses are accepted. Some schools hold this session after regular school hours whereas others conduct it during lunchtime.

Such a policy typically requires additional funding for the necessary support mechanisms, of course. But in the long run, the investment can save money. Because this regular and ongoing support helps students remedy their learning difficulties before they become major problems, schools tend to spend less time and fewer resources in major remediation efforts later on (see Roderick & Camburn, 1999).

Obstacle 5: Students should receive one grade for each subject or course.

If someone proposed combining measures of height, weight, diet, and exercise into a single number or mark to represent a person's physical condition, we would consider it laughable. How could the combination of such diverse measures yield anything meaningful? Yet every day, teachers combine aspects of students' achievement, attitude, responsibility, effort, and behavior into a single grade that's recorded on a report card—and no one questions it.

In determining students' grades, teachers typically merge scores from major exams, compositions, quizzes, projects, and reports, along with evidence from homework, punctuality in turning in assignments, class participation, work habits, and effort. Computerized grading programs help teachers apply different weights to each of these categories (Guskey, 2002a) that then are combined in idiosyncratic ways (see McMillan, 2001; McMillan, Myran, & Workman, 2002). The result is a "hodgepodge grade" that is just as confounded and impossible to interpret as a "physical condition" grade that combined height, weight, diet, and exercise would be (Brookhart & Nitko, 2008; Cross & Frary, 1996).

Recognizing that merging these diverse sources of evidence distorts the meaning of any grade, educators in many parts of the world today assign multiple grades. This idea provides the foundation for standards-based approaches to grading. In particular, educators distinguish product, process, and progress learning criteria (Guskey & Bailey, 2010).

Product criteria are favored by educators who believe that the primary purpose of grading is to communicate summative evaluations of students' achievement and performance (O'Connor, 2002). In other words, they focus on *what* students know and are able to do at a particular point in time. Teachers who use product criteria typically base grades exclusively on final examination scores; final products (reports, projects, or exhibits); overall assessments; and other culminating demonstrations of learning.

Process criteria are emphasized by educators who believe that product criteria do not provide a complete picture of student learning. From their perspective, grades should reflect not only the final results, but also *how* students got there. Teachers who consider responsibility, effort, or work habits when assigning grades use process criteria. So do teachers who count classroom quizzes, formative assessments, homework, punctuality of assignments, class participation, or attendance.

Progress criteria are used by educators who believe that the most important aspect of grading is how much students gain from their learning experiences. Other names for progress criteria include *learning gain*, *improvement scoring*, *value-added learning*, and *educational growth*. Teachers who use progress criteria look at how much improvement students have made over a particular period of time, rather than just where they are at a given moment. As a result, scoring criteria may be highly individualized among students.

Grades might be based, for example, on the number of skills or standards in a learning continuum that students mastered and on the adequacy of that level of progress for each student. Most of the research evidence on progress criteria comes from studies of individualized instruction (Esty & Teppo, 1992) and special education programs (Gersten, Vaughn, & Brengelman, 1996; Jung & Guskey, 2010).

After establishing explicit indicators of product, process, and progress learning criteria, teachers in countries that differentiate among these indicators assign separate grades to each indicator. In this way, they keep grades for responsibility, learning skills, effort, work habits, or learning progress distinct from assessments of achievement and performance (Guskey, 2002b; Stiggins, 2008). The intent is to provide a more accurate and comprehensive picture of what students accomplish in school.

Although schools in the United States are just beginning to catch on to the idea of separate grades for product, process, and progress criteria, many Canadian educators have used the practice for years (Bailey & McTighe, 1996). Each marking period, teachers in these schools assign an achievement grade on the basis of the student's performance on projects, assessments, and other demonstrations of learning. Often expressed as a letter grade or percentage (*A* = advanced, *B* = proficient, *C* = basic, *D* = needs improvement, *F* = unsatisfactory), this achievement grade represents the teacher's judgment of the student's level of performance relative to explicit learning goals established for the subject area or course. Computations of grade-point averages and class ranks are based solely on these achievement or "product" grades.

In addition, teachers assign separate grades for homework, class participation, punctuality of assignments, effort, learning progress, and the like. Because these factors usually relate to specific student behaviors, most teachers record numerical marks for each (*4* = consistently; *3* = usually; *2* = sometimes; and *1* = rarely). To clarify a mark's meaning, teachers often identify specific behavioral indicators. For example, these might be the indicators for a homework mark:

- *4* = All homework assignments are completed and turned in on time.
- *3* = There are one or two missing or incomplete homework assignments.
- *2* = There are three to five missing or incomplete homework assignments.
- *1* = There are numerous missing or incomplete homework assignments.

Teachers sometimes think that reporting multiple grades will increase their grading workload. But those who use the procedure claim that it actually makes grading easier and less work (Guskey, Swan, & Jung, 2011a). Teachers gather the same evidence on student learning that they did before, but they no longer worry about how to weigh or combine that evidence in calculating an overall grade. As a result, they avoid irresolvable arguments about the appropriateness or fairness of various weighting strategies.

Reporting separate grades for product, process, and progress criteria also makes grading more meaningful. Grades for academic achievement reflect precisely that—academic achievement—and not some confusing amalgamation that's impossible to interpret and that rarely presents a true picture of students' proficiency (Guskey, 2002a). Teachers also indicate that students take homework more seriously when it's reported separately. Parents favor the practice because it provides a more comprehensive profile of their child's performance in school (Guskey, Swan, & Jung, 2011b).

The key to success in reporting multiple grades, however, rests in the clear specification of indicators related to product, process, and progress criteria. Teachers must be able to describe how they plan to evaluate students' achievement, attitude, effort, behavior, and progress. Then they must clearly communicate these criteria to students, parents, and others.

No More "We've Always Done It That Way"

Challenging these traditions will not be easy. They've been a part of our education experiences for so long that they usually go unquestioned, despite the fact that they are ineffective and potentially harmful to students.

Education leaders who challenge these traditions must be armed with thoughtful, research-based alternatives. You can't go forward with only passionately argued opinions. To succeed in tearing down old traditions, you must have new traditions to take their place.

This means that education leaders must be familiar with the research on grading and what works best for students so they can propose more meaningful policies and practices that support learning and enhance students' perceptions of themselves as learners. Leaders who have the courage to challenge the traditional approach and the conviction to press for thoughtful, positive reforms are likely to see remarkable results.

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GRADES

that mean something

KENTUCKY DEVELOPS STANDARDS-BASED REPORT CARDS

A group of teachers, school leaders, and education researchers create report cards that link course grades to student progress on mastering state standards.

By Thomas R. Guskey, Gerry M. Swan, and Lee Ann Jung



Deepen your understanding of this article with questions and activities in this month's *Kappan* Professional Development Discussion Guide by Lois Brown Easton. Download a PDF of the guide at kappanmagazine.org.



Nearly all states today have standards for student learning that describe what students should learn and be able to do. Nearly all states also have large-scale accountability assessment programs designed to measure students' proficiency on those standards. Despite these commonalities, schools in each state are left to develop their own standards-based student report cards as the primary means of communicating information about students' performance on state standards.

Although school leaders would undoubtedly like to align their reporting procedures with the same standards and assessments that guide instructional programs, most lack the time and resources to do so. Those few leaders who take up the challenge rarely have expertise in developing effective standards-based reporting forms and inevitably encounter significant design and implementation problems (Guskey & Bailey, 2010).

To help Kentucky educators address this challenge, we worked with a group of teachers and school leaders to develop a common, statewide, standards-based student report card for all grade levels. While some Canadian provinces have used standards-based report cards for many years, Kentucky educators are the first in the U.S. to attempt such a statewide reform. Data from the early implementation demonstrate that schools can implement more effective ways of communicating student learning with little additional work by teachers and that parents and community members can be strong supporters of such reforms. This shows great promise for revolutionizing reporting systems in Kentucky and elsewhere.

STANDARDS-BASED GRADING

Grades have long been identified by those in the measurement community as prime examples of unreliable measurement. Huge differences exist among teachers in the criteria they use when assigning grades. Even in schools where established policies offer guidelines for grading, significant variation remains in individual teachers' grading practices. The unique adaptations teachers use in assigning grades to students with disabilities and English learners make that variation wider still.

These varying grading practices result in part

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from the lack of formal training teachers receive on grading and reporting. Most teachers have scant knowledge of various grading methods, the advantages and shortcomings of each, or the effects of different grading policies on students. As a result, most simply replicate what they experienced as students. Because the nature of these experiences widely vary, so do the grading practices and policies teachers employ. Rarely do these policies and practices reflect those recommended by researchers and aligned with a standards-based approach.

Standards-based approaches to grading and reporting address these grading dilemmas in two important ways. First, they require teachers to base grades on explicit criteria derived from the articulated learning standards. To assign grades, teachers must analyze the meaning of each standard and decide what evidence best reflects achievement of that specific standard. Second, they compel teachers to distinguish product, process, and progress criteria in assigning grades (Guskey, 2006, 2009).

THE KENTUCKY INITIATIVE

We began our standards-based grading initiative in Kentucky by bringing together educators from three diverse school districts who had been working to develop standards-based report cards, unaware of each other's efforts. District and school leaders, along with teacher leaders from each district were invited to a three-day, summer workshop on standards-based report cards led by researchers with expertise in grading and reporting policies and practices.

The first part of the workshop focused on the unique challenges of standards-based grading, recommended practices in grading and reporting, and methods of applying these practices to students with disabilities and English learners. The second part featured school leaders and teachers working to create two standards-based reporting forms: one for grades K-5, and another for grades 6-12. Both report cards included guidelines for reporting on the achievement of students with disabilities and English learners in a standards-based environment (Jung, 2009; Jung & Guskey, 2010).

DEVELOPMENT PROCEDURES

Kentucky has adopted the Common Core State Standards Initiative (CCSSO, 2010). So, the first

SCHOOLS can implement more effective ways of communicating student learning with little additional work by teachers; parents and community members can be strong supporters of such reforms.

step was reducing the long lists of student learning standards in language arts and mathematics outlined in the Core to between four and six clear and precisely worded “reporting standards” expressed in parent-friendly language. That’s because teachers find it burdensome to keep detailed records for every student on large numbers of distinct standards in each subject area, and parent surveys revealed that more than six standards in a given subject area would only overwhelm them with information (Guskey & Bailey, 2001).

The final “reporting standards” for language arts and mathematics closely resembled the “strands” or “domains” under which the curriculum standards are grouped in the Core. We began with the language arts subdomains of Reading, Writing, Speaking/Listening, and Language. In each of these areas, there can be as many as five individual reporting standards.

In Reading, for example, the possible options for reporting standards include Foundational Skills, Key Ideas and Details, Craft and Structure, Integration of Knowledge and Ideas, and Range of Reading, and Level of Text Complexity. The mathematics strands included Operations and Algebraic Thinking, Number and Operations — Base Ten, Number and Operations — Fractions, Measurement and Data, Geometry, and Mathematical Practices.

Reporting standards for other subjects were developed through a similar process, based on the standard strands set forth by leading national organizations. Specifically, we used standards developed by the National Science Teachers Association (1996), National Council for the Social Studies (2010), Consortium of National Arts Education Associations (1994), National Association for Music Education (1994), and National Association for Sport and Physical Education (2004). Using the broad strands described by these national organizations to develop our reporting standards also meant that minor revisions in particular curriculum standards would not necessitate significant change in the content or format of the report cards.

Another important development step was offering separate grades or marks for “product” criteria related to academic performance, “process” criteria associated with work habits, study skills, responsibility, and behavior, and “progress” criteria that describe learning gain. The report cards also included sections for teacher, parent, and student comments.

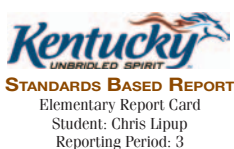
We then built an Internet-based application where teachers could record information on student performance, tally that information to determine grades and marks, and print and distribute report cards. We used open source software that can run on the most basic web infrastructure.

Finally, we made plans to provide all participating schools with face-to-face, online, and telephone support. We scheduled follow-up sessions for each school and provided specific technical support when requested by a school leader or staff member. We also made several presentations to schools’ site-based councils comprising the school principal, teachers and parents.

REPORT CARD STRUCTURE, FORMAT

Figures 1 and 2 illustrate portions of draft forms of our elementary and secondary Kentucky Standards-based Report Cards. The first page of the each report card includes the student’s photograph, name, address, and grade level, along with information about the school and a statement of the report card’s purpose. The pages in the figures follow and provide the standards-based information

FIG. 1.
Example of an Elementary Report from the Standards-based Report Pilot



Standard Marks		Process Marks	
4	Exemplary	++	Consistently
3	Proficient	+	Moderately
2	Progressing	-	Rarely
1	Struggling	N/A	Not Assessed
N/A	Not Assessed		

*Based on modified standard(s). See Progress Report

Grade 2 Language Arts – Ms. Bausch

		Process Goals	
Reading	4	Preparation	+
Writing	3	Participation	++
Speaking	2	Homework	+
Listening	3	Cooperation	++
Language	4	Respect	++

Description/Comments:

Students have been very busy during the 3rd reporting period working on the following topics: consonants, vowels, and their corresponding sounds; identifying syllables in words; stressed and unstressed syllables; closed syllables, vocabulary development; compound words, antonyms; homophones; synonyms, multiple meaning words; idioms; comprehension skills; main ideas and supporting details; fluency; and reading strategies such as sequencing, cause and effect, and facts and opinions. We also worked on how to answer open-response questions.

Chris is improving with the articulation difficulties that we recently observed. We are coordinating efforts with the speech therapist to continue the progress we’ve made into the next marking period.

Grade 2 Mathematics – Mr. Reedy

		Process Goals	
Operations and Algebraic Thinking	3	Preparation	-
Numbers and Operations — Base 10	3	Participation	++
Numbers and Operations — Fractions	2	Homework	-
Measurement and Data	2	Cooperation	++
Geometry	N/A	Respect	+
Mathematical Practices	3		

Description/Comments:

Over the past nine weeks students have been learning about measurement, probability, and data analysis. They explored their world with the concepts of measurement and used tools and units to measure objects in the classroom and at home. They learned that probability can be fun by using Skittles candies to predict the chance of an event. We also learned about numbers on a spinner and how to describe probability using words such as “impossible,” “likely,” and “not likely.” Students learned when and why to use different types of graphs. They created graphs for specific situations and learned that graphs must have titles, labels, x-axis, y-axis, and scale. We even made a classroom grid to identify ordered pairs.

Chris has had a pretty successful marking period, although homework and preparation continue to be issues. Most of the problems Chris is experiencing with measurement and fractions stem from not practicing enough to build a level of fluency. We will begin the next reporting period with supervised study to see if we can help Chris develop better out-of-class study habits.

about a student's school performance.

We included the names and photographs of each student's teachers to personalize the report cards, and to familiarize families with each child's teachers. The underlying structure of the report card is based on course rosters exported digitally from each school's information system.

ELEMENTARY REPORT CARDS

The elementary report card figure shows the section devoted to language arts and mathematics. Each subject has specific content strands so teachers can offer separate grades or marks for each. Although this requires teachers to keep more detailed records of student performance, families get more explicit information about a student's learning strengths and areas where a student may be struggling.

To provide more precise information about each reporting standard, teachers and school leaders are working with content-area specialists to develop an online curriculum resource that identifies specific content and skills promoted by the standard and can be accessed anytime by families. This will allow families to learn, for example, which writing skills in language arts were addressed during the first marking period of 2nd grade or what aspects of measurement and data were the focus of math instruction during the second marking period of 4th grade.

Teachers also record marks for Process Goals related to preparation, participation, homework, cooperation, and respect. Families have online access to information about each goal, along with rubrics for determining the marks. For example, the homework rubric states:

Consistently: All homework assignments were completed during the marking period with a high level of accuracy.

Moderately: Most homework assignments were completed during the marking period with a fair level of accuracy.

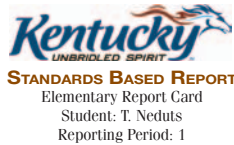
Rarely: Numerous homework assignments were missing during the marking period and/or the work was often inaccurate.

These represent the process goals that the development team considered most important at the elementary level. Team members debated long and hard about including "effort" as a process goal, for example, but abandoned it when they could not reach consensus on appropriate criteria for judging "effort."

Many elementary report cards include process

FIG. 2.

Example of a Secondary Report from the Standards-based Report Pilot



Achievement Grades		Standard Marks		Process Marks	
A	Exemplary	4	Exemplary	++	Consistently
B	Proficient	3	Proficient	+	Moderately
C	Progressing	2	Progressing	-	Rarely
D	Struggling	1	Struggling	N/A	Not Assessed
U	Unsatisfactory	N/A	Not Assessed		

*Based on modified standard(s). See Progress Report

Algebra 1 – Mathematics 200: Mr. Parker

Academic Achievement	C
Operations with real numbers	4
Linear equations and inequalities	3
Relations and functions	2
Polynomials	2
Quadratic, cubic, and radical equations	1
Mathematical reasoning and problem solving	2

Process Goals	
Participation	++
Homework	-
Cooperation	++
Punctuality	+

Description/Comments:

This reporting period we studied probability, statistics, and the beginning units of Algebra I. We completed units on solving one-variable equations and applying one-variable equations to real world situations. Our next major unit of study will be linear functions. We included the following mathematics standards: measures of central tendency, choosing appropriate graphs, interpreting graphs, misleading statistics, polygons, lines and angles. We will conclude the geometry unit at the beginning of the next quarter. Taylor needs to work on focus and attention during class.

Taylor also had several low assessment scores but chose not to retake them. With improved attention and retaking low assessments, I am sure Taylor's grades will improve rapidly.

Biology 1 – Science 205: Mrs. Krall

Academic Achievement	A
Basis of scientific inquiry	4
Physical, chemical, and cellular basis of life	3
Continuity of life and the changes of organisms over time	2
Unity and diversity of life	3
Ecological relationships among organisms	4

Process Goals	
Participation	++
Homework	++
Cooperation	+
Punctuality	-

Description/Comments:

During this quarter we worked on the chemistry foundations for understanding biology. This included the following standards: properties of matter, the Periodic Table, chemical bonding, and balancing chemical equations.

Taylor has done an outstanding job this reporting period. Independent work was very thorough and extremely well done. Taylor grasps ideas very quickly and sometimes moves on without understanding it thoroughly. I was very happy to see Taylor break that habit and really keep on top of the material.

Physical Education – Team Sports 200: Mrs. Sandidge

Academic Achievement	B
Demonstrates competency in motor skills and movement patterns	2
Demonstrates understanding of movement concepts, principles, strategies and tactics	3
Engages regularly in physical activity	2
Achieves and maintains a health-enhancing level of physical fitness	2
Exhibits responsible personal and social behavior that respects self and others	3
Values physical activity for health, enjoyment, challenge, self-expression, and/or social interaction	3

Process Goals	
Participation	++
Homework	-
Cooperation	+
Punctuality	+

Description/Comments:

In this reporting period students were introduced to the basic skills and techniques of basketball. They practiced dribbling, passing, shooting, footwork, rebounding, defense, and combining individual offensive and defensive techniques into play patterns.

Taylor excelled in footwork and defensive positioning, and felt much more comfortable playing defense. Offense was more of a struggle for Taylor, mostly because of a lack of confidence in individual ball-handing skills. We will revisit basketball in the next reporting period. I have given Taylor a set of drills to help develop basic scoring moves that should help enhance that offensive confidence.

goals in sections labeled Work Habits, Study Skills, or Citizenship, and mark these only once on the reporting form. The teachers and school leaders who developed our form strongly believed, however, that families need to know if students behave differently during instruction in different subject areas.

In the final section for Description/Comments, the reporting platform allows for two types of com-

BY A WIDE MARGIN,
families favored the standards-based form over the traditional form.

ments. The first part consists of two or three sentences explaining more precisely the emphasis of instruction during the marking period, adding detail to the online description. The report card of every student in the class includes these sentences. Then teachers can access individual student's records, and add a sentence or two about a particular student's performance. Frequently, teachers offer specific suggestions for helping students.

SECONDARY REPORT CARDS

The secondary report card in Figure 2 also includes the names and photographs of each student's teachers. We also merged the class schedule program with our reporting program so that courses shown on the report card correspond with student schedules.

Because teachers and parents were reluctant to abandon traditional letter grades completely, the secondary report card includes an academic achievement (product) grade for each subject area or course. This grade is used to determine course credit and to calculate grade point averages (GPA) when necessary. We did not give teachers specific directions about how to construct this achievement grade except to say that it should reflect only academic factors and provide an accurate and defensible representation of what students learned in relation to the established learning standards at that point in the school year. We stressed that the achievement grade must be based on the most current evidence of a student's academic performance and can't include nonacademic factors related to work habits or class behavior.

Below the overall achievement grade are Standard Marks for individual standards established for each course. Similar to the elementary report card, these were derived from standard strands established by leading national organizations in each content area. Families eventually will have online access to the performance rubrics for individual Standard Marks. Our plan is to include examples based on student work with many of the rubrics.

Beside the Standard Marks are Process Goals related to Participation, Cooperation, Homework, and Punctuality. Like the elementary form, the rubrics for determining these marks are available online. Team members were particularly insistent on a separate mark for homework to ensure that teachers don't include it as part of the achievement grade.

Below the grade and marks lies the Description/Comments section where teachers enter descriptions of the specific concepts and skills addressed during

that marking period. The descriptions include general statements for the class and individual comments about each student's performance.

Both elementary and secondary report cards allow the teacher to attach custom-scoring criteria for students who may be working on modified standards. The specific strategies developed to support those modifications can then be described in the Individual Education Program (IEP), English Learner (EL) plan, or intervention plans provided to families.

PILOT IMPLEMENTATION

Following the summer workshop, the educators returned to their schools and encouraged other teachers to pilot the new report cards. Participating teachers distributed two report cards to families of 2,093 students for each of the first two quarterly (nine-week) marking periods. One was the traditional report card that had been used in previous years; the other was the newly developed standards-based report card.

At mid-year, after the second distribution of the new report cards, we did an online survey with all participating teachers to learn about their experiences, specifically the time and effort required to gather information, complete, and distribute the report cards. At the same time, we surveyed families of all students who received the new report card to learn their impressions. Both surveys included several common items so that we could compare teachers' and parents' perceptions of the quality and clarity of the information included in the report cards.

Overall, 59% of participating teachers and 45% of families completed and returned our surveys. Teachers were nearly unanimous in agreeing that the standards-based reports provided better and clearer information, and that families found them easy to understand. Although they said completing the standards-based report cards required more time, most teachers indicated that the quality of information they could provide made the extra effort worthwhile.

Parents' and guardians' perceptions mirrored those of the teachers. And by a wide margin, families favored the standards-based form over the traditional form.

In their written comments, the parents of a few secondary students said they were concerned about not having a percentage grade to go along with achievement grade and standards marks. One parent said, "I'm not sure what 'Exemplary,' etc. means in terms of where they stand with the rest of the class. I know what a 97% means." Another parent wrote, "I would still like to see a number or percentage (like 97%, 98%, etc.), not just an A, B, or C." Interestingly, every example of a percentage grade offered by a parent was above 95%. No one mentioned, for

example, the importance of knowing the difference between a 75% and 78%.

FUTURE PLANS

Based on feedback from teachers and parents, we're revising the reporting forms, and enhancing the professional development assistance and technical support offered as we expand implementation. This scaling-up process will take place on three levels. First, several schools in the three pilot districts are using the standards-based report cards school-wide during the 2011-12 school year in place of the traditional report card. Both online support and follow-up sessions will be provided for the staffs of these schools. Second, staff members from other schools in these districts will take part in brief, three-hour training sessions on the new forms, led by teachers already using the forms. These sessions will explain how the new forms were developed, the rationale behind their structure and format, record-keeping procedures, and the available technical support and follow-up assistance. Third, the revised forms will be presented to leadership teams from as many as 20 other Kentucky school districts to solicit their participation in a larger scale, piloting effort. We hope this will provide the basis for statewide

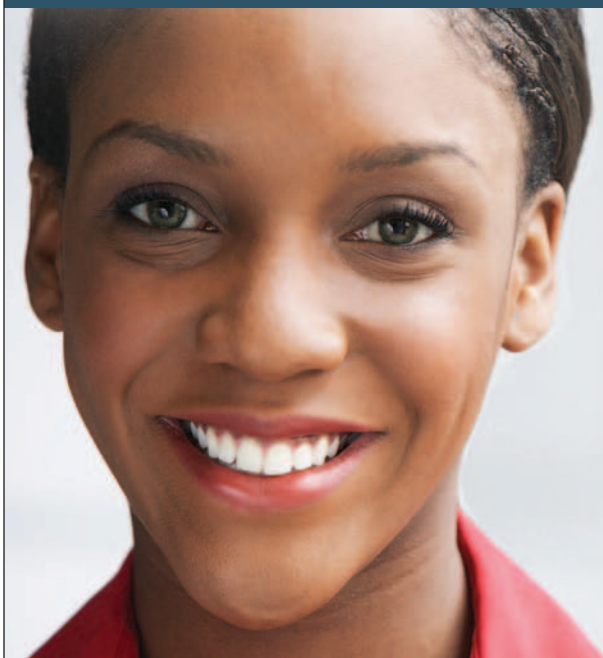
implementation within three to five years.

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Making High School Grades Meaningful

Most teachers base students' grades on more than one factor. The difficulty is figuring out how to weight and combine the different pieces that go into the final mark. Mr. Guskey suggests a system that not only avoids those problems but gives a better overall picture of a student's performance than the traditional single letter grade.

BY THOMAS R. GUSKEY

MICHAEL AND Sheila attend the same high school and take many of the same classes. Michael is an exceptionally bright but obstinate student. He consistently gets high grades on classroom quizzes and tests, even though he rarely completes homework assignments and is often tardy. His compositions and reports show keen insight and present thoughtful analyses of critical issues but are usually turned in two or three days late. Because of his missing homework assignments and lack of punctuality, Michael receives C's in most of his classes, and his grade-point average lands him in the middle of his high school class rankings. But Michael scores at the highest level on the state

THOMAS R. GUSKEY is a professor in the College of Education, University of Kentucky, Lexington. ©2006, Thomas R. Guskey.



accountability assessment and qualifies for an honors diploma.

Sheila, on the other hand, is an extremely dedicated and hard-working student. She completes every homework assignment, takes advantage of extra-credit options in all of her classes, and regularly attends special study sessions held by her teachers. Yet, despite her efforts, Sheila often performs poorly on classroom quizzes and tests. Her compositions and reports are well organized and turned in on time but rarely demonstrate more than a surface understanding of critical issues. Sheila also receives C's in most of her classes and has a class ranking very similar to Michael's. But because she scores at a low level on the state accountability assessment, Sheila is at risk of receiving an alternative diploma.

A rare situation, you say? Unlikely or even impossible? Ask any high school teacher today and most will tell you that they know students very much like Michael and Sheila. Many will admit that they currently have similar students in their classes. While Michael and Sheila may not be typical high school students, they also are not unusual.

How is it possible for students with such different levels of demonstrated knowledge and skill to receive essentially the same grades in their high school classes? How can they have roughly the same grade-point average and class ranking? What does this tell us about the meaning of high school grades and the students who receive those grades? And, most important, what does this tell us about the grading policies and practices of many high school teachers?

HODGEPODGE GRADING

Many educators contend that the problem lies in the accountability assessments. They believe that the discrepancy between high school course grades and scores on state accountability assessments demonstrates the inadequacy and invalidity of the assessment results.¹ Indeed, these narrow once-a-year assessments may not reveal the true scope or depth of students' knowledge and skills. On the other hand, policy makers argue that teachers are the source of the problem. They think the mismatch between grades and scores on accountability assessments stems from bias and subjectivity in teachers' grading practices.² There is ample evidence that most teachers receive little training in effective grading and that unintentional bias often influences teachers' grade assignments.³ However, a more likely explanation lies in the nature of grading itself and in the

challenges teachers face in assigning grades that offer a fair and accurate picture of students' achievement and performance.

High school teachers today draw from many different sources of evidence in determining students' grades, and studies show that teachers differ in the procedures they use to combine or summarize that evidence.⁴ Some of the major sources of evidence teachers use include:

- Major exams or compositions
- Class quizzes
- Reports or projects
- Student portfolios
- Exhibits of student work
- Laboratory projects
- Student notebooks or journals
- Classroom observations
- Oral presentations
- Homework completion
- Homework quality
- Class participation
- Work habits and neatness
- Effort
- Attendance
- Punctuality of assignment submissions
- Class behavior or attitude
- Progress made

When asked *which* of these sources of evidence they consider in determining students' grades, some portion of teachers will report using each one of the elements on the list. When asked *how many* of these sources of evidence they include, however, responses vary widely. Some teachers base grades on as few as two or three elements, while others incorporate evidence from as many as 15 or 16 — and this is true even among teachers who teach in the same school.

Two factors seem to account for this variation. First is a lack of clarity about the purpose of grading. Decisions about what evidence to use in determining students' grades are extremely difficult to make when the purpose of grading is unclear. Different sources of evidence vary in their appropriateness and validity depending on the identified purpose.

A second reason for the variation is the format used to report grades. Most high school reporting forms allow only a single grade to be assigned to students for each course or subject area. This compels teachers to distill all of these diverse sources of evidence into a single symbol. The result is a "hodgepodge grade" that includes elements of achievement, attitude, effort, and behavior.⁵ Even when teachers clarify the weighting strategies they use to combine these elements and employ computerized grading programs to ensure accuracy in their computations, the final grade remains a confusing amalgamation that is impossible to interpret and

rarely presents a true picture of a student's proficiency.⁶

To make high school grades more meaningful, we need to address both of these factors. First, we must clarify our purpose in grading. Second, we must decide what evidence best serves that purpose and how best to communicate a summary of that evidence to parents and others.

CLARIFYING PURPOSES AND CRITERIA

When asked to identify the purpose of grading, most high school teachers indicate that grades should describe how well students have achieved the learning goals established for a course. In other words, grades should reflect students' performance based on specific learning criteria. Teachers and students alike prefer this approach because they consider it both fair and equitable.⁷ But, as described earlier, teachers use widely varying criteria to determine students' grades. In most cases, these can be grouped into three broad categories: *product*, *process*, and *progress* criteria.

Product criteria are favored by advocates of standards-based or performance-based approaches to teaching and learning. These educators believe the primary purpose of grading is to communicate a summative evaluation of student achievement and performance.⁸ In other words, they seek to assess *what* students know and are able to do at a particular point in time. Teachers who use product criteria typically base grades exclusively on final examination scores, final reports or projects, overall assessments, and other culminating demonstrations of learning.

Process criteria are emphasized by educators who believe product criteria do not provide a complete picture of student learning. From their perspective, grades should reflect not only the final results but also *how* students got there. Teachers who consider effort or work habits when assigning grades are using process criteria, as are teachers who factor regular classroom quizzes, homework, punctuality of assignments, class participation, or attendance into grade calculations.

Progress criteria are used by educators who believe that the most important aspect of grading is how much students have gained from their learning experiences. Other names for progress criteria include "learning gain," "improvement scoring," "value-added learning," and "educational growth." Some educators draw distinctions between progress, which they measure backward from a final performance standard or goal, and growth, which is measured forward from the place a

student begins on a learning continuum.⁹ However, when achievement is judged using well-defined learning standards that include graduated levels of performance, progress and growth criteria can be considered synonymous.

Teachers who use progress criteria typically look at how much improvement students have made over a specified period of time, rather than just where they are at any one point. As a result, the scoring criteria used in determining student grades may be highly individualized. Most of the current research evidence on the use of progress criteria in grading comes from studies of individualized instruction and special education programs.¹⁰

Because of concerns about student motivation, self-esteem, and the social consequences of grades, few teachers use only product criteria in determining grades. Instead, most routinely base their grading procedures on some combination of all three types of evidence.¹¹ Many also vary their grading criteria from student to student, taking into account individual circumstances.¹² Although teachers defend this practice on the basis of fairness, it seriously blurs the meaning of any grade. Interpreting grades thus becomes exceptionally challenging, not only for parents but also for administrators, community members, and even the students themselves.¹³ A grade of A, for example, may mean that the student knew what was intended before instruction began (product), did not learn as well as expected but tried very hard (process), or simply made significant improvement (progress).

CONFLICTING SOLUTIONS

Recognizing these interpretation problems, most researchers and measurement specialists recommend the exclusive use of product criteria in determining students' grades. They point out that the more process and progress criteria come into play, the more subjective and biased grades become.¹⁴ How can a teacher know, for example, how difficult a task was for students or how hard they worked to complete it?

Many teachers point out, however, that if they use only product criteria in determining grades, some high-ability students will receive high grades with little effort, while the hard work of less-talented students will go unacknowledged. Consider, for example, two students enrolled in the same physical education class. The first is a well-coordinated athlete who can easily perform any task the teacher asks and so typically does not put forth serious effort. The second student is strug-

gling with a weight problem but consistently tries hard, exerts extraordinary effort, and also displays exceptional sportsmanship and cooperation. Nevertheless, this student is unable to perform at the same level as the athlete. Few teachers would consider it fair to use only product criteria in determining the grades of these two students.¹⁵

Teachers also emphasize that, if only product criteria are considered, low-ability students and those who are disadvantaged — the students who must work hardest — have the least incentive to do so. These students find the relationship between high effort and low grades frustrating and often express their frustration with indifference, deception, or disruption.¹⁶

A MEANINGFUL ALTERNATIVE

An increasing number of teachers and schools have adopted a practical solution to the problems associated with incorporating these different learning criteria into student grades: they report separate grades or marks on each set of criteria. In other words, after establishing explicit indicators of product, process, and progress criteria, teachers assign a separate grade to each. In this way grades or marks for learning skills, effort, work habits, and learning progress are kept distinct from assessments of achievement and performance.¹⁷ The intent is to provide a better, more accurate, and much more comprehensive picture of what students accomplish in school.

While high school teachers in the United States are

just beginning to catch on to the idea of separate grades for product, process, and progress criteria, many Canadian educators have used the practice for years.¹⁸ Each marking period teachers assign students an “achievement” grade based on the students’ performance on projects, assessments, and other demonstrations of learning. Often expressed as a letter grade or percentage (A = advanced, B = proficient, C = basic, D = needs improvement, F = unsatisfactory), this “achievement” grade represents the teacher’s judgment of the student’s level of performance or accomplishment relative to explicit learning goals established for the course. Computations of grade-point averages and class ranks are based solely on these “achievement” or product grades.

In addition, teachers also assign separate grades or marks for homework, class participation, punctuality of assignment submissions, effort, learning progress, and the like. Because these factors usually relate to specific student behaviors, most teachers record numerical marks for each (4 = consistently, 3 = usually, 2 = sometimes, and 1 = rarely). To clarify a mark’s meaning, teachers identify specific behavioral indicators for these factors and for the levels of performance in each. For example, the indicators for a “homework” mark might include:

4 = All homework assignments completed and turned in on time.

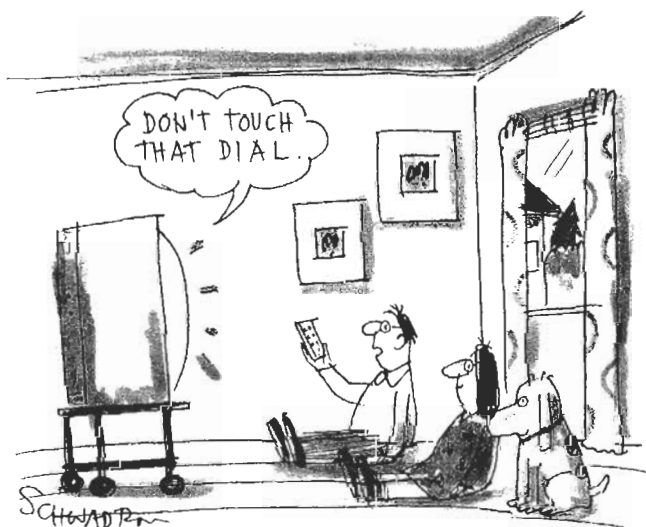
3 = Only one or two missing or incomplete homework assignments.

2 = Three to five missing or incomplete homework assignments.

1 = Numerous missing or incomplete homework assignments.

Teachers sometimes question the need for this level of specificity. Upon reflection, however, most discover that by including homework assignments as part of an overall grade for students, they already face this challenge. When determining an overall grade, teachers must decide how much credit to give students for completing homework assignments or how much to take away for assignments that were turned in late or not at all. Similarly, when reporting a separate grade for homework, teachers must ensure that students understand the various performance levels so that they know what the mark signifies and what must be done to improve.

Often teachers presume that reporting multiple grades will increase their grading workload. But those who use the procedure claim that it actually makes grading easier and less work. Teachers gather the same evidence on student learning that they did when calculating an over-



“What’s a dial?”

all grade but no longer worry about how to weight or combine that evidence. As a result, they avoid irresolvable arguments about the appropriateness or fairness of various weighting strategies.

Reporting separate grades for product, process, and progress criteria also makes grading more meaningful. If a parent questions the teacher about a product grade, for example, the teacher simply points to the various

The key to success in reporting multiple grades rests on the clear specification of indicators related to product, process, and progress criteria.

process indicators and suggests, "Perhaps if your child completed homework assignments and participated more in class, the 'achievement' grade would be higher." Parents favor the practice because it provides a more comprehensive profile of their child's performance in school. Employers and college admission officers also like systems of separate grades because they offer more detailed information on students' accomplishments. With all grades reported on the transcript, a college admissions office can distinguish between the student who earned high achievement grades with relatively little effort and the one who earned equally high grades through diligence and hard work. The transcript thus becomes a more robust document, presenting a better and more discerning portrait of students' high school experiences.¹⁹

Schools would still have the information needed to compute grade-point averages and class rankings, if such computations are still deemed important. Now, however, those averages and rankings would be untainted by undefined aspects of process and progress. As such, they would represent a more valid and appropriate measure of achievement and performance. Furthermore, to the extent that classroom assessments and state accountability assessments are based on the same standards for learning, the relationship between product grades and accountability assessment results would likely be much higher.

The key to success in reporting multiple grades, however, rests on the clear specification of indicators related to product, process, and progress criteria. Teachers must be able to describe exactly how they plan to evaluate students' achievement, attitude, effort, behavior, and

progress. Then they must clearly communicate these criteria to students, parents, and others.

CONCLUSION

The relationship between high school grades and students' performance on state accountability assessments will never be perfect. Grades are derived from courses that can vary significantly across schools and classrooms. In contrast, state accountability assessments typically are designed to measure proficiency based on a set of common standards for student learning. As such, the developers of these types of assessments purposefully avoid content that may be unique to particular learners or learning situations. Furthermore, course grades normally reflect a much broader range of knowledge and skills than can be measured by limited accountability assessments with restricted modes of student response.²⁰ Nevertheless, concerns about honesty and fairness compel us to reduce the mismatch between these two important measures of student knowledge and skill.

Developing meaningful, reasonable, and equitable grading policies and practices will continue to challenge high school educators. The challenge remains all the more daunting, however, if we continue to use reporting forms that require teachers to combine so many diverse sources of evidence into a single grade. Distinguishing specific "product" criteria on which to base an "achievement" grade allows teachers to offer a better and more precise description of students' academic achievement and performance. To the extent that "process" criteria related to homework, class participation, attitude, effort, responsibility, behavior, and other nonacademic factors remain important, they too can be reported. But they should be reported separately. Adopting this approach will clarify the meaning of grades and greatly enhance their communicative value.

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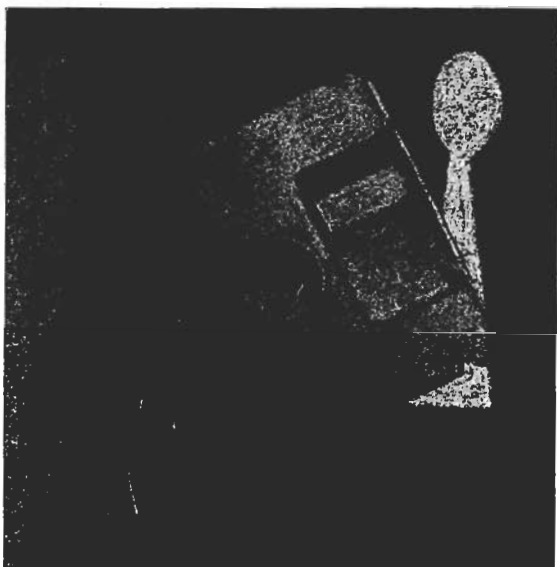
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Computerized Gradebooks And the Myth Of Objectivity



Computerized grading programs and electronic gradebooks can be useful tools. But in the end, Mr. Guskey reminds us, teachers must still decide what grade offers the most accurate and fairest

description of each student's achievement and level of performance.

BY THOMAS R. GUSKEY

IF YOU ASK middle school or high school teachers today how they determine their students' grades, the first thing most of them will do is open a computerized grading program. They'll show you the vast array of data they keep on each student and explain how they weigh the different pieces of information. At the end of the marking period, they combine these various measures and, with the help of the computer, calculate a summary score to the one-hundred-thousandth of a decimal point. The computer then converts this summary score into the letter grade that is printed on a report card and sent home to parents. Many teachers will also go on to describe the fairness and objectivity of this process, pointing out how the mathematical precision of the computer makes it easy for them to explain and to defend their grading policies to students, to parents, and to administrators.

But do computerized gradebooks really make grading fairer and more objective? Or have the technical capabilities of these programs seduced teachers and school leaders into a false sense of confidence in the

accuracy and validity of the grades they assign?

COMPUTERIZED GRADEBOOKS

Computerized grading programs and electronic gradebooks rank among the best-selling computer software available to educators today. They appeal to teachers primarily because they simplify record-keeping. The spreadsheet formats and database management systems

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TABLE 1.
Summary Grades Tallied by Three Different Methods

Student	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Average Score	Grade	Median Score	Grade	Deleting Lowest	Grade
1	59	69	79	89	99	79	C	79	C	84	B
2	99	89	79	69	59	79	C	79	C	84	B
3	77	80	80	78	80	79	C	80	B	79.5	C
4	49	49	98	99	100	79	C	98	A	86.5	B
5	100	99	98	49	49	79	C	98	A	86.5	B
6	0	98	98	99	100	79	C	98	A	98.8	A
7	100	99	98	98	0	79	C	98	A	98.8	A

Grading Scale: 90%-100%=A, 80%-89%=B, 70%-79%=C, 60%-69%=D, 59% or lower=F.

included in these programs make it easy for teachers to enter and tally precisely large amounts of numerical information.¹ Thus they are suited particularly well to the point-based grading systems of middle school and high school teachers, who often record numerical data on the performance of more than 100 students each week.

Most computerized grading programs also present educators with a wide range of options. Some simply help teachers to keep more detailed records on students' learning progress.² Others allow teachers to present summaries of their students' achievement and performance in a variety of different formats, including computer displays, online reports, and even digital portfolios. Still other programs actually perform grading tasks. The simplest of these scan, mark, and analyze assessments composed of true/false, matching, and multiple-choice items. More recently, however, exciting advances have been made in the use of computers to evaluate and grade students' essays, compositions, and other writing samples.³

For all their advantages, however, computerized grading programs also have their shortcomings. Perhaps the most serious is that they lead the educators who use them to believe that mathematical precision necessarily brings greater objectivity and enhanced fairness to grading. Many teachers assume that, so long as the mathematical calculations are correct and all students are treated the same, then the grades assigned are accurate and just. But numerical precision is not the same as evaluative fairness, honesty, or truth. While computerized grading programs and electronic gradebooks may greatly simplify record-keeping, they do not lessen the challenge involved in assigning grades that accurately and honestly reflect students' level of performance.

MATHEMATICAL PRECISION VERSUS VALID GRADES

Consider, for example, the data in Table 1. The scores on the left side of the table reflect the performance of seven students over five instructional units. The scores on the right represent summary scores for these students calculated by three different methods. The first method is the simple arithmetic average of the unit scores, with all units receiving equal weight. The second is the median or middle score from the five units.⁴ Because the median is positional rather than proportional, it's not influenced by extreme scores, as is an average. The third method is also an arithmetic average, but with the lowest unit score in the group deleted. This method is based on the assumption that no one, including students, performs at a peak level all the time.⁵ These are the three tallying methods most frequently used by teachers and most commonly employed in computerized grading programs and electronic gradebooks.

Consider, too, the following explanations for these score patterns:

- Student 1 struggled in the early part of the marking period but continued to work hard, improved in each unit, and performed excellently in unit 5.
- Student 2 began with excellent performance in unit 1 but then lost motivation, declined steadily during the marking period, and received a failing mark for unit 5.
- Student 3 performed steadily throughout the marking period, receiving three B's and two C's, both near the cutoff between B and C.
- Student 4 began the marking period poorly and failed the first two units but, with newfound interest, performed excellently in units 3, 4, and 5.

- Student 5 began the marking period excellently but then lost interest and failed the last two units.

- Student 6 skipped school (an unexcused absence) during the first unit but performed excellently in every other unit.

- Student 7 performed excellently in the first four units but was caught cheating on the assessment for unit 5 and received a score of zero for that unit.

As is evident from Table 1, all three of these tallying methods are mathematically precise. Yet each one yields a very different pattern of grades for these seven students. If you use the simple arithmetic average, all seven students would receive the same grade of C. If you use the median, there would be just two C's, one B, and four A's. And if you use an arithmetic average with the lowest score deleted, there would be just one C, four B's, and two A's. Note, too, that the one student who would receive a grade of C using this third method had unit grades of just two C's and three B's. More important, not one student would receive the same grade across all three methods. In fact, two students (Student 4 and Student 5) could receive a grade of A, B, or C, depending on the tallying method you use.

The teacher responsible for assigning grades to the performance of these seven students has to answer a number of difficult questions. For example, which of these three methods is fairest? Which method provides the most accurate summary of each student's achievement and level of performance? Do all seven students deserve the same grade, as using the arithmetic average suggests, or are there defensible reasons to justify different grades for certain students? And if there are reasons to justify different grades, can these reasons be clearly specified? Can they be fairly and equitably applied to the performance of all students? Can these reasons be clearly communicated to students before instruction begins? Would it be fair to apply them if they were not communicated to students?

The nature of the assessment information from which these scores are derived could make matters even more tangled. It might make a difference, for example, if the content of each unit assessment was cumulative. In other words, the assessment for unit 2 contained material from units 1 and 2, and the unit 5 assessment included material from all five previous units. And if it did, would this make these grading decisions any easier, or would it further complicate summary calculations?

What should be evident in this example is that the use of computerized grading programs won't solve these

complex grading problems. Although such programs can simplify numerical record-keeping, the mathematical precision they offer does not make the grading process any more objective or any fairer. Calculating a summary score to the one-hundred-thousandth of a decimal point doesn't yield a more accurate depiction of students' achievement and level of performance. Each teacher still must decide what information goes into the calculation, what weight will be attached to each source of information, and what method will be used to tally and summarize that information.

This example also illustrates several questionable grading practices that computerized grading programs typically ignore. Although not new and certainly not inherent in the use of technology in grading, the potentially harmful effects of these practices make it imperative that educators carefully examine their impact and consider other alternatives. Three such practices include 1) averaging scores to determine a grade, 2) the use of zeroes, and 3) taking credit away from students or lowering their grade because of behavioral infractions.

AVERAGING SCORES TO DETERMINE A GRADE

If a mark or grade is supposed to represent an accurate description of how well students have learned, as most experts on grading agree it should,⁶ then the practice of averaging generally falls far short. For example, how often have you heard students lament, "I have to get an A on the final exam in order to pass this course"? But does this situation really make sense, or does it illustrate the inappropriateness of averaging? If a final examination or summative performance truly represents a comprehensive assessment of what students have learned, how can an A level of performance there translate to a C or D for the course grade? Similarly, if a final grade is to reflect what students have learned and can do at the end of the course, can averaging scores from past assessments with measures of current performance be considered appropriate?

Educators generally recognize learning as a progressive and incremental process. Most also agree that students should have multiple opportunities to demonstrate their learning. But is it fair to consider all these learning trials in determining students' grades? If at any time in the instructional process students demonstrate that they've learned the concepts well and mastered the intended learning goals, doesn't that make all previous information on their learning of those con-



"This isn't a report card. It's a worst-case scenario."

cepts inaccurate and invalid? Why then should such information be "averaged in" when determining students' grades?

Because any single measure of learning can be unreliable, most researchers recommend using several indicators to determine students' marks or grades.⁷ Nevertheless, teachers must continually ask themselves, "What information provides the most accurate depiction of students' learning at this time?" In nearly all cases, the answer is "the most current information." If students demonstrate that past assessment results no longer accurately reflect their learning, that information must be discarded and replaced by the new information. Continuing to rely on past assessment data miscommunicates students' achievement. Can you imagine, for example, the karate teacher suggesting that a student who starts with a white belt but then progresses to earn a black belt actually deserves a gray belt?

Averaging can also have detrimental effects on student motivation. Suppose, for example, that a student does poorly on one or two major assessments administered early in the marking period, as was the case with Student 4 and Student 6 in Table 1. Knowing that those scores will be "averaged in" as part of the final grade, what motivation do these students have to do well on other assessments? Even if they perform at the highest level from that time on, the practice of averaging gives them virtually no chance of attaining a high grade.

And consider this extreme but true occurrence. A high school student I know experienced the death of

a beloved family member during the first marking period of his senior year. The trauma of that experience proved exceptionally difficult for this young man. As a result, he neglected his schoolwork completely and received failing grades in all his courses. But then, with help from counselors, family and community members, and his teachers, he recovered emotionally, re-dedicated himself to his schooling, and with diligent effort attained A's in all his courses during the remaining three marking periods of the school year. Because of his school's policy of averaging, however, his final course grades were all C's. Did those C's accurately reflect what he had learned? Did they represent what he had accomplished? Did they adequately describe his achievement or level of performance? Was this fair?

Recognizing that single measures of student learning can be flawed or unreliable, most teachers use multiple sources of information when assigning marks or grades. But simply combining all such measures and calculating an average is rarely appropriate or fair. Some educators argue that the median or middle score provides a more appropriate measure,⁸ but that practice, too, can be problematic.

To provide an accurate summary of students' performance, teachers must begin by looking for consistency in the evidence gathered. If that evidence is consistent across several indicators, then deciding what grade to assign is relatively straightforward. This would be the case, for example, for students who obtained very similar scores on a class project, on two summative examinations, and on an oral report. But even these cases get complicated when scores consistently fall near the cutoff between two grades. Note, for example, the scores of Student 3 in Table 1.

If the evidence of student achievement is inconsistent, then teachers must look deeper and search for the reasons why.⁹ They also have to face the difficult challenge of deciding what evidence or combination of evidence represents the truest and most appropriate summary of students' achievement and performance. In such cases, three general guidelines can be recommended.¹⁰

First, the most recent evidence should always be given priority or greater weight. Because grades are usually meant to represent students' current achievement status or level of performance, the most accurate evidence is generally the evidence collected most recently. Therefore, scores from assessments at the end of the marking period are typically more representa-

tive of what students have learned than those collected at the beginning.

A second strategy is to give priority or greater weight to the most comprehensive forms of evidence. If certain sources of evidence represent cumulative summaries of the knowledge and skills students have acquired, then these should hold the greatest weight in determining students' grades. Exceptions to this approach might be necessary, however, for students who suffer inordinate test or performance anxiety. Such students typically do remarkably well on assignments, quizzes, and class discussions, but then "freeze" during larger assessments or performances. In these cases, teachers may have to consider other means of gathering evidence, such as orally questioning those students or providing some other means for them to demonstrate their learning, in order to get a more valid representation of what they can do.

A third approach would be to "rank order" the evidence gathered in terms of its importance to the learning goals or standards of the course. Those sources of evidence that relate to the most important goals or standards should then be given priority. For example, teachers might attach greater importance to students' scores on a project that required them to synthesize and apply what they had learned than they might give to the scores students attained on assessments designed to tap basic knowledge and comprehension of course content.

Whatever strategy teachers choose, they must be sure to apply that strategy consistently. Although exceptions to accommodate unusual or extenuating circumstances are always permissible, fairness in grading dictates that teachers inform students about their grading policies and practices in advance and then faithfully and consistently apply those policies.

THE USE OF ZEROES

Few teachers believe that grades should be used to punish students for their lack of effort or for demonstrating inadequate responsibility. At the same time, however, many teachers assign zeroes to student work that is missed, neglected, or turned in late.¹¹ Obviously, if grades are to represent how well students have learned, then the practice of assigning zeroes for "administrative or behavioral" reasons clearly misses the mark.

Zeroes have an even more profound effect if combined with the practice of averaging. Students who receive a single zero have little chance of success because

such an extreme score so drastically skews the average. (Note, for example, the scores of Student 6 and Student 7 in Table 1.) For this reason, in scoring Olympic events like gymnastics and diving, the highest and lowest judges' scores are always eliminated before the averaging takes place. If they were not, a single judge could control the results of an entire competition simply by giving extreme scores.

Some teachers defend the practice of assigning zeroes by arguing that they cannot give students credit for work that is incomplete or not turned in — and that's certainly true. But there are far better ways to motivate and encourage students to complete assignments than by assigning them zeroes, especially considering the overwhelmingly negative effects.

One alternative approach is to assign an "incomplete" and then require students to do additional work to bring their performance up to an acceptable level. Students who miss an assignment or neglect a project deadline, for example, might be required to attend after-school study sessions or special Saturday school programs in order to complete their work. In other words, these students are not "let off the hook" with a zero. Instead, students learn that they have responsibilities in school and that their actions have specific consequences. In addition, it helps to make the grade a more accurate reflection of what the students have actually learned.

LOWERING GRADES BECAUSE OF BEHAVIOR

Another typical grading practice with detrimental effects is lowering students' grades because of behavioral infractions. Some teachers lower students' grades for classroom disruptions and similar forms of misconduct. Other teachers consider tardiness or class attendance in determining students' grades and often reduce the grades of students who are late or who miss class sessions. Teachers also vary widely in how they handle such offenses as plagiarism, copying another student's work, and other forms of "cheating." But most teachers weigh such transgressions heavily when determining students' grades.

Student 6 and Student 7 in Table 1 offer excellent examples. Although Student 6 performed exceptionally well throughout most of the marking period, a zero due to an unexcused absence could severely affect his or her course grade. Student 7 performed excellently in four units but was then caught cheating on the assessment for unit 5 and received a zero. Most teachers

would undoubtedly consider this a fair response to Student 7's infraction. But when it comes to determining this student's course grade, the issues become thornier. Some teachers would look at the achievement history over the marking period, conclude that this incident was an exception, and assign the student a high grade. Others would reason that the high marks in earlier units could well have been attained through cheating as well, although the student didn't get caught. Hence, they would feel justified in assigning a lower grade.

The essential question the teacher must address in each of these cases is, "What is the purpose of grading?" If the purpose of grading is to present a summary judgment of students' achievement and level of performance, then to count these behavioral infractions in determining the grade clearly miscommunicates. Although such infractions cannot be ignored, it's clear that they are not part of the evidence that shows what these students have learned and are able to do.

A better strategy is to report these behavioral infractions separately and not include them as part of the course grade. For example, in a growing number of schools, reporting forms are designed to include indicators of students' class behaviors and work habits in addition to grades representing their achievement and level of performance.¹² In other words, teachers report "multiple grades" in each course, separating evidence of students' learning from information about their behavior and conduct.

Some educators might feel that reporting multiple grades makes both record-keeping and grading procedures overly complicated. But those who use this approach report that it actually simplifies grading. They collect no additional information from students and have eliminated the final step of having to combine these diverse sources of evidence. By separating the different aspects of students' performance in school, these teachers provide more specific information to parents and to students. In addition, they are able to identify more clearly students' strengths as well as areas in which improvement is needed.

Computerized grading programs and electronic gradebooks greatly simplify the record-keeping tasks teachers face. They allow teachers to collect and efficiently summarize large amounts of data on student learning. But the efficiency and mathematical precision of these programs does not make the grades they generate more accurate, honest, fair, or objective.

Grading requires careful planning, thoughtful judgment, a clear focus on purpose, excellent communication skills, and an overriding concern for the well-being of students — qualities that no computer possesses. Teachers at all levels must make carefully reasoned decisions about which components will be included in determining students' grades, how those components will be combined and summarized, and what format will be used to report the summaries. While computerized grading programs and electronic gradebooks can be useful tools, they do not relieve teachers of the professional responsibilities involved in making these crucial decisions. In the end, teachers must still decide what grade offers the most accurate and fairest description of each student's achievement and level of performance.

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