

Just curious as how you all handle homework in terms of grade percentage, how it's graded, etc.

Thanks!

Nathan Kidwell  
Holly High School  
Holly, MI

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I simply do shoulder checks for 4 points a day. A test is worth 100 points, a quiz about 30. Homework ends up being somewhere between 5 and 10%.

I have, however, started assigning 4 or 5 hypothesis tests or CIs. I use random numbers to determine one student for each question to solve a problem on an overhead transparency. The 4 students selected don't do all of the problem--simply the one that they will present. If a student is assigned at random two days in a row, I give that person the option of 1 problem to present or all of the homework assigned.

This method is working very well as I simply post the overhead on the whiteboard, have the solution presented, then I use a marker on the white board to make notes on the problem. I am able to show examples of errors that students make and how to avoid them.

Mark Marstaller

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I take HW questions every day, but I don't collect it. I collect all the HW on the day of a quiz or test and randomly pick a few questions to grade and use them as bonus points on the quiz/test. This means that every quiz/test is curved, but only the students who do the HW benefit from the curve.

That being said, a minority of the students do the HW. Homework compliance in my high school and in the community college where I teach evenings has steadily been declining. Is it just my schools? I'd like to hear from others about HW compliance.

[mmfen@bellsouth.net](mailto:mmfen@bellsouth.net)

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I have 2 VERY different classes. One is a very motivated class that always do their assigned problems. The other class won't do anything unless it is for a grade.

What I do is have both classes complete problems in class and turn them in. I spot check them for errors in procedure (the class that always does their work complained a little, but they ultimately liked doing problems with me readily available to help, when needed). I usually return them the next day so they can correct any errors I have found. I also assign other problems for homework, but don't take them up. We do go over them. Daily grades are only 25%, so they get 100 if they complete the problems in class. Quizzes are included in the 25%. The quizzes are usually the problems I assigned for homework, so those that do them do quite well. It has helped get the unmotivated class to do more homework....somewhat.

Exams are 75% of their grade.

Linda Puckett  
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All homework is extra credit. That is, if they do no homework for the quarter, their grade is their raw test average. Homework is checked for completeness. They must attempt almost all of the problems to get full extra credit for the HW.

They get the following extra credit for doing homework: For doing all the homework that a particular test covers, I add 1 percent to that test. For doing all the homework (with less than or equal to 3 missing HW for the quarter), I add 1 percent to their quarter test average.

In addition, doing homework allows students to take a retest and to do test corrections to raise a poor test grade. The method is not for everyone, but it works for me and my classes.

[Duane Miller](#)

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I make homework worth 20% of their grade, 80% tests & quizzes. I've struggled a lot with how to do homework because grading it can consume you.

This year I have decided on quality, not quantity. I assign, on average, about 5 problems each night and then they grade their homework the next class period. It is graded on accuracy, and all my answer keys are typed with point values assigned to each problem so they know how many points to take off. They then just write minus how many at the top and then I spot check to make sure they have graded accurately. Typing up the answer keys for me has been time consuming, but well worth it because now I have them for next year and it allows my students who do their homework early to come in and check their answers and if they don't get them correct they can ask questions and still have time to correct it before it is due.

In years past I only graded on completion and the homework they would turn in sometimes was a big mess because the problems can take a while and they got frustrated from the amount of homework. I would rather them do 3, 4, or 5 problems really well rather than do 10 half-~~and~~!@!

Kristen Chavez  
Mill Valley High School  
[kchavez@usd232.org](mailto:kchavez@usd232.org)

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There are many views and opinions about homework: how much to give and what to do with it. But, I do have some concern about grading homework in terms of quality. Some students have a big advantage over others when doing homework: help at home, already knowing how to do it, etc. I think that if you are having difficulties with the topics ... trying to work on homework related to those just puts

you in a worse off position. It's like easy points for the smarter kids and tough points to come by for those struggling with the content.

Regardless of one's view about HW, I think overall the major goal of it is to have kids practice. Thus, I think rewards for this should be based on evidence that they TRIED ... not how well they did it.

Just my opinion.

Dennis Roberts

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I agree with Dennis that there are many differing views about grading homework. What works for one may or may not work for others. In my classes, I never grade homework for the very reason Dennis points out--the major goal of it is practice. With that in mind, I'd argue it should NOT be graded at all. Grading it based on either effort or correctness pollutes the final summative mark given to a student.

Grades should reflect a student's level of achievement against a set of learnings, not how hard they tried, how quickly they catch on to concepts, or how compliant they were to playing the game of school. To factor in points for "completing" homework can artificially inflate grades, while factoring in points based on the "correctness" of homework can artificially punish those students who may not pick up on the skills as quickly as others.

For example, suppose Jason is a quick learn and easily breezes through the homework, ultimately earning a 92% on his summative assessment. Because he did all of his homework correctly, his grade is bumped up a bit. Corey, on the other hand, takes a while to catch on to concepts. He tries all of the homework, but gets a lot wrong. After getting a lot of help from his friend, Dave, Corey also earns a 92% on his summative assessment, but his overall grade will be lower than Jason's because he didn't learn the concepts as quickly as Jason did. Is Corey's final grade an accurate reflection of his achievement against the desired learnings? If he and Jason ended up at the same point, shouldn't they earn the same grade? The answer to this, of course, will depend on how you define a "grade" in your class. I won't even get into the difficulties of grading Paul, who simply copies Doug's homework everyday.

Many will argue that by removing the "points" from homework, you remove the student's motivation to do it. That may be true...however, that motivation factor can be overcome by offering a different incentive for doing the work (other than the practice aspect, of course). In my classes, students were given opportunities to demonstrate their learning again if they bombed a certain aspect of a test (ie, "retake"). However, students could only access that opportunity if they had completed all homework related to the concepts they intended to try again. If they wanted the right to retake a portion of an exam, they had to demonstrate they were putting forth the effort to practice along the way. I never had an issue with kids failing to do the homework and none of it was graded.

Again, this worked for me and may or may not work for others. Just my \$0.02.

Jason M. Molesky  
Assessment and Accountability Coordinator  
Department of Teaching and Learning  
Lakeville Area Public Schools

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I agree whole-heartedly with Jason:

Grades should reflect a student's level of achievement against a set of learnings, not how hard they tried, how quickly they catch on to concepts, or how compliant they were to playing the game of school.

I've started making some changes to my own grading policies in the last month. What finally did it for was when I realized that one student who failed nearly every test but did all the HW and lots of EC earned a C+ in my class 1st semester and another student earned an A on nearly every test but hardly ever turned in HW or EC and earned a C-. In my mind there was no doubt which student had learned more, but the grades I gave those students were not reflective of what the students had learned. I'm in the process of increasing the weight of tests in my class from approximately 65% to 75% or 85% and will no longer be giving points for attendance or EC for things that don't directly measure what a student has learned. I'm allowing students to retake tests.

[randy niemiec](#)

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Warning! Lengthy diatribe ahead!

Hello All,

I'd like to add my 2 cents to the discussion that has spiraled off from homework policies.

I, too, have struggled over the years to figure out the best balance of homework, tests, projects, etc. in determining student grades. I also have tried many different homework policies: grading for accuracy, grading for completion, grading for effort, random homework checks, no grading homework, you name it. Right now in Statistics, I collect homework once in a blue moon, just to keep some kids on their toes. At the end of the marking period, I give a small bonus to the kids who consistently do it.

I have seen the opinion expressed here, and in other places, that grades should be based solely on learning outcomes. Grading for "compliance", for lack of a better word, is frowned upon.

Let me tell you about the non-AP component of my day. I also teach 4 sections of Algebra to mostly 9th and 10th graders (and the occasional Junior or Senior). The top 30% of the 9th grade is not here. They have already been accelerated to Algebra in grade 8, and now take Geometry. Most 10th graders in my class have taken a PreAlgebra course as freshmen, and are, shall we say, reluctant learners. The rest of the 10th graders and the Juniors and Seniors are here because they have yet to pass the course.

Typically, 75% of a student's grade is based on tests, quizzes, and projects. The other 25% is based on homework. I require that students try every exercise, and ask questions about the exercises they don't understand, making corrections before they hand in their assignments. Now, every good economist knows that incentives work, but they sometimes have unintended consequences. There is the occasional kid that passes simply by virtue of working his/her tail off doing homework, while tanking tests and quizzes left and right. I'm OK with that. And I have kids who are very smart, but have no work ethic, whose grades are lower than their performance on tests and quizzes might indicate. I'm OK with that, too. But, overall, I mostly get what I'm after. Kids do the homework at first, since it is tied heavily to their grade. Then, hopefully, they realize that practice on the homework translates to understanding, which translates to high test and quiz grades.

I guess it boils down to the fact that not all of my objectives are mathematical. I want kids to learn work habits that will serve them well in my course, the next course, college, and beyond. If that means I require a little hoop-jumping on their part, then so be it. I think it's a mistake to think of high school students as mini college students, who should already know what is required of serious learners. It's my job to teach them what is required of serious learners. On one end of the spectrum, we have elementary school, in which kids are assessed (almost) entirely on compliance. On the other end is college, where students are assessed (almost) entirely on how well they demonstrate understanding of the content. In the middle is a continuum where they are growing up, and hopefully learning how to learn. I have no problem rewarding them for behaviors that will help them do this.

Bill Craine  
Lansing (NY) High

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Bill:

I think that it is a mistake to assume that college students are serious learners. Also, I look forward to one day teaching at a college where students are only assessed on their demonstrated understanding of content. At all of the schools that I have taught (several major and minor state universities, and one selective, liberal arts school), I and my colleagues have used a mix of grading for content and grading for completion on homework in all classes at all levels. I have never known of a colleague who based grades entirely on exams, or who did not give at least partial credit for attempted solutions on some homework problems. Entering college is not like crossing a vertical asymptote, and, except perhaps at certain exceptional schools (and perhaps only in their honors programs), the first year of college is usually only somewhat more rigorous than high school. I cannot tell you how many times I have heard from colleagues in English that their youthful dreams of grading solely on interpretation and analysis had been reduced to a reality of grading based on evidence that the students had read the texts or at least watched the movies. In short, college still sits in the middle of the expectations continuum. Indeed, I hear from colleges at business schools that students still expect to be in the middle of the continuum in MBA programs. (Perhaps that is one reason why respect for MBA degrees has fallen over the last few decades.)

You would be surprised at the number of college faculty who are comfortable that a student who might be a D student based on exams alone is a C student due to dogged completion of the homework. It is only recently that the typical D student could find or buy almost any homework problem solution online, meaning that doggedness is no longer necessary. Trust me, that will unfortunately lead to a reduction in the grade contribution allocated to "open-web" assignments; it certainly has in my department. There simply are not enough creative assignments to outrun the horde of web-posted solutions and online solution consultants. Ebooks, Google, WolframAlpha will not make our students smarter, but they will make it harder for us to assess what they actually know.

Jeff Stuart  
PLU Math Department

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Our district, K-12, is gearing up to move to a policy that

- 1) does not allow for zeros as grades, and
- 2) changes our grading scale to a 4 point scale (4=a, 3=b, etc). Part of the discussion is centering around

drop out rates and high school graduation rates...but basically, the option to not do work is no longer an option (thus no zeros) and the 4-3-2-1 scale is in response to the idea that a traditional grading scale (90-80-70-60) is not "equally" spaced and therefore a zero will have a big impact on the average...so...

Brad Holloway

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Brad and All --

Brad reports yet another attempt to enter the field of measurement...

- > Our district, K-12, is gearing up to move to a policy that
- > 1) does not allow for zeros as grades, and
- > 2) changes our grading scale to a 4 point scale (4=a, 3=b, etc).

I think I remember initially reading about such attempts in the first scene in Macbeth where the three administrators are having a meeting...

Fair is foul, and foul is fair:  
Hover through the fog and filthy air.

-- Chris Olsen

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Evidently, the idea of a zero being nonexistent in education is becoming popular.  
If this happens in math or stats, we're in trouble.

At my school, we can give nothing lower than 40%. If a student attempts any problem, it becomes 50%.

We did get our online grade book programmed to record NHI (not handed in). This is averaged as a 40%, but at least students and parents will see that the work was not done.

Sally Miller

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Although I have not checked by taking a sample, my suspicion is that most school board members are business owners, managers or self-employed professionals. That makes the 40% floor on grades ironic; I am sure that none of them would support a state rule that wage-earning employees must be paid at least 40% of their hourly pay when they do not show up for work.

J. Stuart  
PLU Math Department

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Those kind of analogies don't apply to homework.

Corey Andreasen

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I agree with Corey here. We must be careful when drawing analogies between grading/homework and pay/etc. Grades are not pay. They are not rewards. They are not compensation. They are meant to report a student's achievement relative to the desired learning. The reasoning behind assigning a 40 or 50 for a minimum score vs. a zero is not to inflate grades or reward students for doing nothing, it is to create an equal-interval scale for more meaningful calculations. Since most schools utilize the classic 90-80-70-60 scale, we are operating under a system in which the scale between an F and a D is 60 points versus 10 points between the other grades.

Further, since the most prevalent practice when assigning grades involves averaging scores to determine a final mark it should be clear why assigning a zero to missing/subpar work and, subsequently, summarizing performance based on an average of scores would result in a summative mark that doesn't best represent the overall distribution. Doug Reeves wrote an article that explains this concept nicely...I recommend "The Case Against the Zero" (Phi Delta Kappan, Vol 86, No 4, pp 324-325) to anyone who is interested in a quick read on the ideas behind the movement to remove zeros. I am neither an advocate for or against utilizing zeros in grading schemes. I see the reasoning behind it, but also understand the difficulty in shifting the current practice (from an administrative, teaching, parent, and student perspective). I do, however, see a great amount of value in the discussion about the meaning of grades and appropriate calculations it is spurring!

Jason M. Molesky

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Much of the discussion thus far has been about how to assess/evaluate/grade student homework. I'm going to veer off slightly by saying a few words about the purposes of homework. Several folks have already mentioned that homework gives students an important opportunity to check their understanding of important terms and concepts, to practice using the methods of statistics, and to apply what they have learned in novel contexts. Just as important, however, is the need for students to receive specific and timely feedback about their work. We all have our favorite ways of doing this: small groups of students meeting for several minutes at the start of class to compare solutions; individuals or groups of students presenting solutions to their peers; putting up solutions on the Smartboard for students to review; us looking at students' papers, either in the moment or after class. Student performance on homework gives us essential feedback about our teaching and our students' learning.

If students don't do the homework in my class, much is lost not only for them but also for their classmates and for me. Basically, the unprepared student has little to contribute to the homework discussion that day. So I'm not in the camp that says homework is optional. And my computer's random selection program doesn't mind calling on a student who hasn't done the work to answer a question, either!

Daren Starnes  
Math Department Chair & Master Teacher  
The Lawrenceville School

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I doubt if the "powers that be" gave it this much thought, but establishing a minimum grade merely makes percentage grades more like letter grades.  $(A + F) / 2 = C$ , except now it's  $(100 + 50) / 2 = 75$ , at least roughly.

The question "what is the 40% or 50% of?" is exactly the question that is too infrequently asked by

educators, about their own grading practices. It's easy to say 40% - 50% of the material, but the real answer is more likely 40% to 50% of the points available on this test, which were subjectively weighted to the problems by the teacher, who took a non-random sample of the material in the unit when making the test. Add in the fact that I can make 2 tests that could be said to "cover" a particular unit, one of which all of my students could ace, and another where no one would top 30%. If I honestly ask myself "40% or 50% of what?", I have to answer "I have no idea", and realize that percentages are pretty meaningless as grades. That's why we should use some of the data analysis skills we teach our students to analyze our own grading practices. Trying to meaningfully sort and measure student achievement is difficult, but that's why we get paid all of the money and twice the respect by society ;)

I'm all for minimum grades, and use them all the time, though I obviously wish I had less NEED to use them. It's just a different way of coding. I might use the equivalent of 50 for the lowest "trying" grade, and use the equivalent of 40 for "never saw it", but see little educational benefit in the 0. One or two 0s is the equivalent of telling a student "try again next quarter". A 40 is survivable, if they choose to change their ways. Along with that, however, means that you have to educate your students (and your administrators) that a 60 average with me isn't "just a couple points" from passing. It's the rough equivalent of the 38 from Mr. Points Possible down the hall.

But, ask me about this 3 years from now, and I'll have something slightly different to say about it. To paraphrase something that Dan Kennedy (I think) wrote or said somewhere, don't trust anyone who thinks that their grading method is correct or even fair.

Bill Craine

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Maybe the administrators hope a similar evaluation will be applied to them?-)

I can see where this might have come out of some sort of fairness argument. When I team taught a course with some historians they claimed to not know what to make of grades I assigned like "75%".

They graded 0-4 as GPA is done, so there could be a 0, but it counted like a 50% in my classes. Imagine courses with four equally weighted exams. A 4-0-0-0 is a solid D while in my system 100-0-0-0 would not be anywhere near passing. It's human nature to feel that if any two policies differ, the one we see as being to our disadvantage must be the one that is "unfair".

My proposal is to offer a variety of grading programs from "everybody passes" on up. The only slight catch is that a choice would be binding for life, so if you opted for "everybody passes" you would get a doctor who "graduated" under that plan, you would have to pay your unlicensed plumber for not showing up, have your taxes and utility bills figured by someone who is right 40% of the time, etc.

Bob Hayden

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There are two distinct phases to what we do in terms of assessment. 1: we try to devise measuring tools (tests/projects/assignments,etc.) to see what students learn or can do. 2: we then try to make a judgment as to what that performance level means (excuse the pun) in terms of quality. The two things are not equivalent and an attempt to make them the same is doomed to failure.

(later post, same topic)→

We seem to think that assigning a grade is the same as measuring students performance. It is not. Assigning a grade is an overall evaluative decision that the teacher makes with respect to all the measured "things" on the students.

Grading is NOT easy. But what I know is this: changing the policy from NOT allowing scores like 0 to appear on the record of a student over the happenings in a course ... won't make grading any easier.

Dennis Roberts

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This is our first year with 40% minimum. Unfortunately, the kids don't really understand it.

Last year, you could point out to a kid that they have a 22% average and must start working, and you could get some effort from the student.

This year, with the 40% minimum, the student sees an average of 42% and figures that they don't have to do much. Their reasoning seems to be that if they have a 42% with almost no effort, just doing a couple of assignments should give them a passing grade.

They are definitely less motivated this year (except for my AP Stat cherubs, of course)

Sally Miller

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I just give the kids this grade:

3 points for trying and 1 point for all problems correct, a total of 4 points, Some points may be deducted if only half the problems attempted, etc...

If turned in on time, they can correct what they get back and raise to a full grade by the end of the grading period. If late, the highest grade they can ever get on it is 2 points.

This has been working really well for me, especially in terms of accounting for all the variables homework has that tests, etc. don't.

Vesta Jones

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We seem to think that assigning a grade is the same as measuring students performance. It is not. Assigning a grade is an overall evaluative decision that the teacher makes with respect to all the measured "things" on the students.

Fernando O Antunez

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I believe it's fair to say that there are MANY correct ways to assess both your teaching and student performance. At the end of the day, each teacher has to be comfortable that the grade on each individual homework, quiz, test, project....and final grade conveys an accurate message to the student, parents, YOU, next year's teacher or school about the student's performance.

If having 0 helps you achieve that end, and a student with one or more zeroes has a final grade that conveys an accurate message, great. If having a different lower bound helps you achieve that end....great. Ultimately, do your grades accurately represent what should be said about the students in your class?

Adam Yankay  
Mathematics Department Chair  
Wayland Academy

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Adam,

Because more school systems are going to online grade books which parents can view, teachers no longer have the discretion of what works for them. School systems are requiring uniformity among all teachers. The scale used or the value of not turning in a paper are not decisions that lowly teachers get to make.

Sally

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Sally,

When I was a private school teacher with a whopping 6 years of experience and using a 0-100 scale, we hired a Headmaster who, without consulting any faculty in general, unilaterally said "there will be no grade below a 50. You will love it...or you will learn to love it". I fought....I was almost fired. I went with it. I adjusted. I grew professionally.

The Headmaster was fired a year later and I no longer work there anyways. But I am thankful that he challenged me, even if he may not have done it in the most productive or cooperative manner. Or maybe the failure was mine! Now I give no grade below a 40 on quizzes or tests.

My current employer wants to make grades accessible to parents online. I happen to like that idea....but what I know is that I'm clever enough to make ANY system work even if I didn't like it. And since most teachers are more clever than I am.....I don't believe there is a system that can't be properly managed to communicate what a good teacher is intending to communicate.

Adam Yankay

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Dennis Roberts <dmr@psu.edu> writes:

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>So, what is the problem with saying that if a student gets an F (whether 0 on things could be part of that or not), they have not met even minimal standards for desired learning? I am not sure why a statement of F has to have some transformational  
>connection to a numerical value ... ie, grade.

Absolutely nothing. In fact, a student who has not met minimum standards SHOULD get an F. The issue is not whether or not an F should be assigned. The issue is whether or not the practices used to determine the grade results in the assignment of an F that is not warranted. The "case against the zero" argues that assigning zeros can result in a final calculation (generally average) that misrepresents the actual

achievement. Again, I neither advocate for or against using zeros. I advocate for rethinking one's grading practice to ensure it results in an accurate description of the student's learning and achievement.

>

>>If we convert scores like 0 ... or 10 ... or 20 ... or 30 ... or 40 ... to 50s .... it has to move the average UP. For sure it inflates scores.

Does it inflate them, or does it act like somewhat of a market correction? Saying it inflates scores assumes the past/traditional practice is the only correct way of determining a grade. Just because that's the way most people have always done it doesn't mean it's necessarily the best or the correct method.

>

>>If anyone wants to try to make the case for the percentage scale that schools use as being an interval scale, all the more power to them. For sure, it's not. What means 10% in Mr. Jones class doesn't have to bear any connection to what 10% means in Mrs. Smith's class.

That's the reasoning behind rethinking and adjusting the floor of the scale. Researchers who favor standards-based/rubric-based grading prefer an equal-interval scale which the percentage scale most certainly is not. I agree with you that 10% in Mr. Jones' class doesn't bear any connection to what 10% in Mrs. Smith's class. That's another fundamental problem with grading. If everyone is left to calculate grades with little to no common practices, the grades themselves become somewhat meaningless. A C in my class may have warranted a A in another based on different calculation schemes. Sure, we may have a common scale, but that doesn't mean anything unless we have common practices for calculating the value that will be placed against that scale.

>We seem to think that assigning a grade is the same as measuring students performance. It is not. Assigning a grade is an overall evaluative decision that the teacher makes with respect to all the measured "things" on the students.

I couldn't have said it any better myself. The advent of the classic red book, spreadsheets, and electronic gradebooks has convinced many that creative calculation/weighting schemes and mathematical precision and are equivalent to a valid grading system. Accurately reporting student learning requires much more than tallying points, calculating a final result, and assigning a summative mark.

Jason M. Molesky

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I like zeros in my gradebook for exactly the reason why schools want to eliminate them. They are so much worse than, well anything, it really puts the responsibility on the student of making sure they have done SOMETHING for each item in the gradebook.

To a point, I support the IDEA behind 40 or 50 as the lowest score but ONLY for the students who are present and attempting the work. I prefer scales that distinguish between students at all parts of the scale so perhaps the scores that would have been 0 to 50's are now 40's to 50's.

But not handing it in OR not showing up for the test has to still be a zero.

How much and with which assignments I do this depends a great deal on the students I am teaching. If I can get them to come in for retakes, I don't have to "boost the bottom."

Ruth

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The "zero effect" is real. So since we are using a skewed distribution for grades, why don't we use a median?

Mary Harrison

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I use a trimmed mean instead.

Nick Mangieri

*(excerpts are from the AP Stats listserve, February 2011)*