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12-2013

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Recommended Citation

Mulder, David J., "Shifting from the “Bucket-o-Points” to “Big Ideas” Assessment" (2013). *Faculty Work: Comprehensive List*. Paper 10. http://digitalcollections.dordt.edu/faculty_work/10

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Keywords

assessment, grading, reflection, theory and practice

Disciplines

Education | Educational Assessment, Evaluation, and Research

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<http://www.cejonline.com/article/shifting-from-the-bucket-o-points-to-big-ideas-assessment/>

Shifting from the “Bucket-o-Points” to “Big Ideas” Assessment

The idea of assigning a letter as a way to measure student learning is kind of bizarre if you really think about it. The trouble is, we *don't* usually think about it. We accept this as a “normal” part of school because it's such a common practice that it *feels* normal, right?

So I ask you to reflect deeply with me for a few minutes about what that letter truly represents. Consider report card grades: condensing a whole term's worth of learning into one symbol—doesn't that strike you as a pretty outrageous reduction?

This year marks my sixteenth as an educator. My thinking about the meaning and purpose of assessment has definitely shifted over time. For years, I served as a middle school math and science teacher. Being a “math guy,” I had programmed a spreadsheet to do my calculations, weighting different categories, and even color-coding so I would know at a glance what grades students were getting. Looking back now, I call my approach then the “Bucket-o-Points” approach to grading.

Here is the basic scheme behind the Bucket-o-Points method:

1. The teacher decides on the categories he or she is going to use. Perhaps “Homework” is a category, maybe “Quizzes” would be another, and “Tests” another.
2. The teacher decides how much each category (or “bucket”) is going to be worth in the overall grade. Maybe Homework is 40 percent, Quizzes 30 percent, and Tests 30 percent.
3. Each assignment adds more points to the bucket. Students take a test? Add the points to the Tests bucket. Students do a problem set for homework? Add the points to the Homework bucket.
4. How big do the buckets get? It depends on the number of assignments the teacher gives for each category. This is why the percentages are assigned. Perhaps the teacher will give twenty homework assignments for five points each, making the Homework bucket one hundred points. Perhaps the teacher will give two thirty-point quizzes, making the Quiz bucket sixty points. Perhaps the teacher gives just one test for seventy-five points. The percentages allow the teacher to weight each category to make the final grade “fit” his or her ideal.
5. At the end of the term, the teacher calculates how big each bucket is. How many points were possible for that category this term? Then the teacher calculates how “full” each bucket is. How many points did the students receive for their work? Did they miss assignments? They missed chances to fill their bucket! Did they only get partial credit? They missed chances to fill their bucket! This is the step we often call “averaging” grades: adding up how many points the student received and dividing by the number of points

possible. If there were fifty points possible for Quizzes that term, and the student received forty-four points, they would score 88 percent for quizzes.

6. The students' grades for the term then are determined by the formula the teacher devises: each bucket is measured to see how full it is and then these numbers have the percentages applied to them to determine the students' final mark. Each percentage correlates to a letter grade on a predetermined scale. (A = 96–100 percent, A- = 90–95 percent, etc.)
7. These letters are reported to students and their parents as a summary of the learning the students have done over the course of the term.

Not all teachers take this detailed, weighted approach to grading, of course. But that said, the majority of teachers I've spoken with use some version of the Bucket-o-Points method. They might just have one bucket, but the basic approach is the same.

This is such a common practice that you're probably just nodding along and saying, “Yep. That's how it works.” But let's think about this for a moment: What does that letter *really* represent? Supposedly, all of the information from the term is compressed into that one symbol. So a student with a B+ has clearly learned more than a student with a C+, right?

Not necessarily.

The Problem with Averaging Grades

Purely mathematically, the C+ might be because the student refuses to turn in homework assignments or doesn't show her work as may be required in a math course. It's not that she doesn't *understand* the concepts to be learned. Maybe her Tests and Quizzes buckets were nearly full to the brim—she understands the material at a high level! But because her Homework bucket is so empty, her whole grade is lower. Does the C+ really represent what she has *learned* in that case?

Or perhaps our student with the B+ actually learned *much* more than the student with the C+? Perhaps our student with the C+ is very adept getting her homework done, on time and complete. Perhaps she has a parent helping out on a nightly basis. But when it comes to test and quiz time, she is not performing well at all. In this case, the brimming bucket of Homework raises her grade higher than it might otherwise appear, because her Quiz and Test buckets aren't as full. Again, does the C+ really represent what she has *learned* in this case?

As I became more and more aware of these kinds of idiosyncrasies in my grading practices, I began moving away from the Bucket-o-Points method. I stopped weighting categories, going to just one bucket, which led to minimizing the importance of homework. Then I began to assign less homework, which led to looking at alternative ways to generate a grade entirely, a way to distance myself from “points” altogether.

I’m a work in progress—I don’t have this all figured out. But I’m pretty convinced that the Bucket-o-Points method is flawed, and it probably doesn’t give a very accurate picture of learning. When we come right down to it, that’s really the point of grading, after all—to provide an evaluative summary of what our students have learned.

I believe there are four real problems with the Bucket-o-Points method of averaging grades:

1. Averaging grades this way can turn our students into grade-grubbers, fighting for and quibbling over every point. Rather than focusing on whether or not they are *learning*, they are focused on what they are “earning.”
2. Averaging grades this way can turn evaluation something punitive because we may “punish” students for not turning in work or for doing incomplete work. Obviously, this doesn’t really show what students have learned. The meaning of the grade is distorted, and becomes a measure of compliance, rather than a summary of learning.
3. Averaging grades this way can make teachers seek to assess what is easily quantifiable (factual knowledge, right-or-wrong answers) over what is most valued (holistic understanding, depth of thinking.) I’m not suggesting that student shouldn’t “know” things! But surely we are more interested in how students put the things they know together: how they understand, apply, analyze, synthesize, and evaluate ideas.
4. Averaging grades this way seeks to reduce the richness of a student’s learning to a single symbol. The problem is that this kind of reductionism has to leave things out. A portfolio of artifacts is, by way of comparison, going to be a more authentic means of demonstrating a student’s learning than a single symbol. But we have so much cultural inertia behind the quantifying, it might seem like there is no hope for an alternative.

What Makes Up a Grade?

When we assign a grade, what factors into the mark we generate? Student learning is certainly a factor, hopefully the most important factor! But what else do we include? Teachers often incorporate things like effort, participation, attendance, and even behavior in the grades they generate. Some teachers penalize students not putting their names on their papers or for not coming to class with their materials or for turning work in late. But grades are often held over students’ heads this way: “If you don’t turn your assignment in on time, you’ll lose 10 percent of your grade.”

If grades are really intended to demonstrate what students have learned, we need to rethink how we generate a grade. And the first thing we need to do is remove all of the clutter that corrupts the meaning of the mark. The grade should only be a representation of a student’s learning. No effort points. No participation points. No loss of points when he forgets his name on the paper. The achievement of learning objectives should be the only component of the grade. This means teachers need to be clear about what they expect students to learn, and design assessment tasks that actually measure what *matters*, not just what is convenient for the teacher.

An Alternative to the Bucket-o-Points: Standards-Based Assessment

I was bothered enough by the shortcomings of the Bucket-o-Points method that I started looking earnestly for alternatives. When I was working on my masters’ degree, I became acquainted with the idea of standards-based assessment, and I conducted an action-research project in which I designed a standards-based assessment and evaluation system and put it into practice in my middle school science class. It was a wild adventure for me and for my students, their parents, and my colleagues as well because standards-based assessment is so unlike the familiar Bucket-o-Points method. Here is part of my explanation to my students:

Your grade for each quarter in this class will be determined by how well you’ve mastered the concepts we’re studying during that quarter. I’ve broken down the material we will learn about into five to eight “Big Ideas” for each quarter. Your quarter grade will be determined by how well you can show me that you understand those Big Ideas.

Whenever you have an assignment, I’ll use it to check your understanding of one or more Big Ideas. I don’t put letter grades (such as C+ or A-) or even scores (18/20 or 90 percent) on any assignments: not on essays, lab sheets, quizzes. Basically, you won’t see letter grades on anything other than report cards. So how will you know how you’re doing? Here’s what I do instead: you’ll get a number score written on your assignment, and written comments from me about what you did well and what you can improve. The number shows what I’d rank your current level of understanding of that Big Idea based on that assignment. Here’s the numbers and what they mean:

1 = Beginning “Beginning” means . . .

You’re just beginning to understand this Big Idea. Time to get to work, learn more about it, and show me you’re getting it!

2 = Developing “Developing” means . . .

You’ve got the basics, but you still have more to learn about this Big Idea. Keep working—you’ll learn more about it!

3 = Proficient “Proficient” means . . .

All right! You’ve got it! You really understand this Big Idea the way a student at your grade level should.

4 = Advanced “Advanced” means . . .

Wow! You *really* understand this Big Idea—at a level beyond what I’d expect someone at your grade level to be able to explain.

As you learn more and more about the Big Ideas for a quarter, you’ll have many opportunities to show me what you’ve learned. At the beginning of the quarter, you might not know *anything* about one or more of the Big Ideas—but that’s okay, because you come to school to “get smart,” right? The key is that you continue to show me that you understand more and more about the Big Ideas as you learn more and more about them. The goal is that *everyone* will have a “proficient” understanding of all the Big Ideas by the end of the quarter.

You may be asking, “Why in the world do you do this, Mr. Mulder??” That’s a fair question. There are five main reasons:

1. We don’t all learn at the same pace. Some students learn things really quickly, while others sometimes need a little more time to really understand. Having multiple times to show me what you know, understand, and are able to do, helps me see how you are growing in your understanding. Even if you understand the basics right away, you can continue to add depth to your understanding as you learn more. In this grading system, I’m keeping track of your *growth*, not just whether or not you’ve handed in all your assignments or passed a test.
2. I like to give my students choices in class. Sometimes we won’t all be doing the same assignment, but the assignment you choose *will* still help show me how you understand one or more Big Ideas. For example, you might choose to write an essay to explain how you understand something, while one of your classmates would rather make a poster to explain, and another might prefer to make a presentation to the class. This grading system allows everyone to show what they know and how they are understanding things without my trying to make all the assignments worth the same number of “points.”
3. I’ve found in my years of teaching that many (not all, but many) students care more about their *grade* than about whether they are *learning* anything. I know this firsthand: As a student, I’m the type who tries to figure out how little I can do and still get an A—and then that’s all I do. (Yeah, I have a bit of a lazy streak in me that way.) This grading system is intended to take some of the focus off the *grade*, and put more emphasis on whether or not you are *learning*.
4. I care more that you *understand* things than that you can simply memorize things. I have had many classes in my own school career that emphasized knowing all the stuff for a test. Once the test was over, however, it didn’t really matter whether or not we really understood the material. We only had to remember the facts as long as it took us to take the test. With this grading system, you really do have to understand things! I will still ask you to memorize things in science class, but the memorizing you’ll do is pointed at helping you really *understand* the Big Ideas.
 - A. Feedback helps you grow. In my opinion, getting a paper back with a C+ or an A, or a D- doesn’t really help you. I think this just puts you in a box. It doesn’t help you

know *how* to improve your work, and it doesn't *encourage* you to improve your work. But, if you get a paper back with a “2” at the top—you know you're on the right track to get this Big Idea, and if a comment on your paper says, “Let's practice those graphing skills,” you know what you need to do to make it better next time.

It might take you a little while to get used to this, but students often come to like it, because it gives them the time they need to learn a concept, and takes off some of the pressure. To me, this seems like a very fair way for all of you to show me what you know, understand, and are able to do. If you have questions, please ask, and I'd be happy to talk more about this with you.

Can you see yourself taking this kind of approach? In truth, many of my students (and their parents) were a little confused by it at first because it was so different than what they were used to! But the majority of them were won over as they became more familiar with it. Many students appreciated the fact that I gave them the chance to *act* on feedback and redo the work to show that they had learned the material, right up to the end of the marking period. Many parents commented to me that they thought this approach was superior to traditional letter grades, because it reduced students' tendency to “cram” before a test, and instead take the feedback they had received and look for ways to learn the things they had not yet mastered. I won't pretend that it was perfect or flawless; in fact, because I was the only person using standards-based assessment in my school, it actually caused a little friction with some colleagues who couldn't accept the idea that I was encouraging students to redo their work or retake a quiz. A few students, usually those who were good at the Bucket-o-Points method, also struggled with this approach because they felt I was changing the “rules” on them.

I believe that the purpose of school is learning. If this is really the case, it's incumbent on us educators to do all we can to ensure that students *actually learn*! This includes our assessment practices. We must consider whether the way we are assessing our students actually promotes learning. In my own teaching practice, this meant it was time to kick the Bucket, and shift to Big Ideas instead.

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