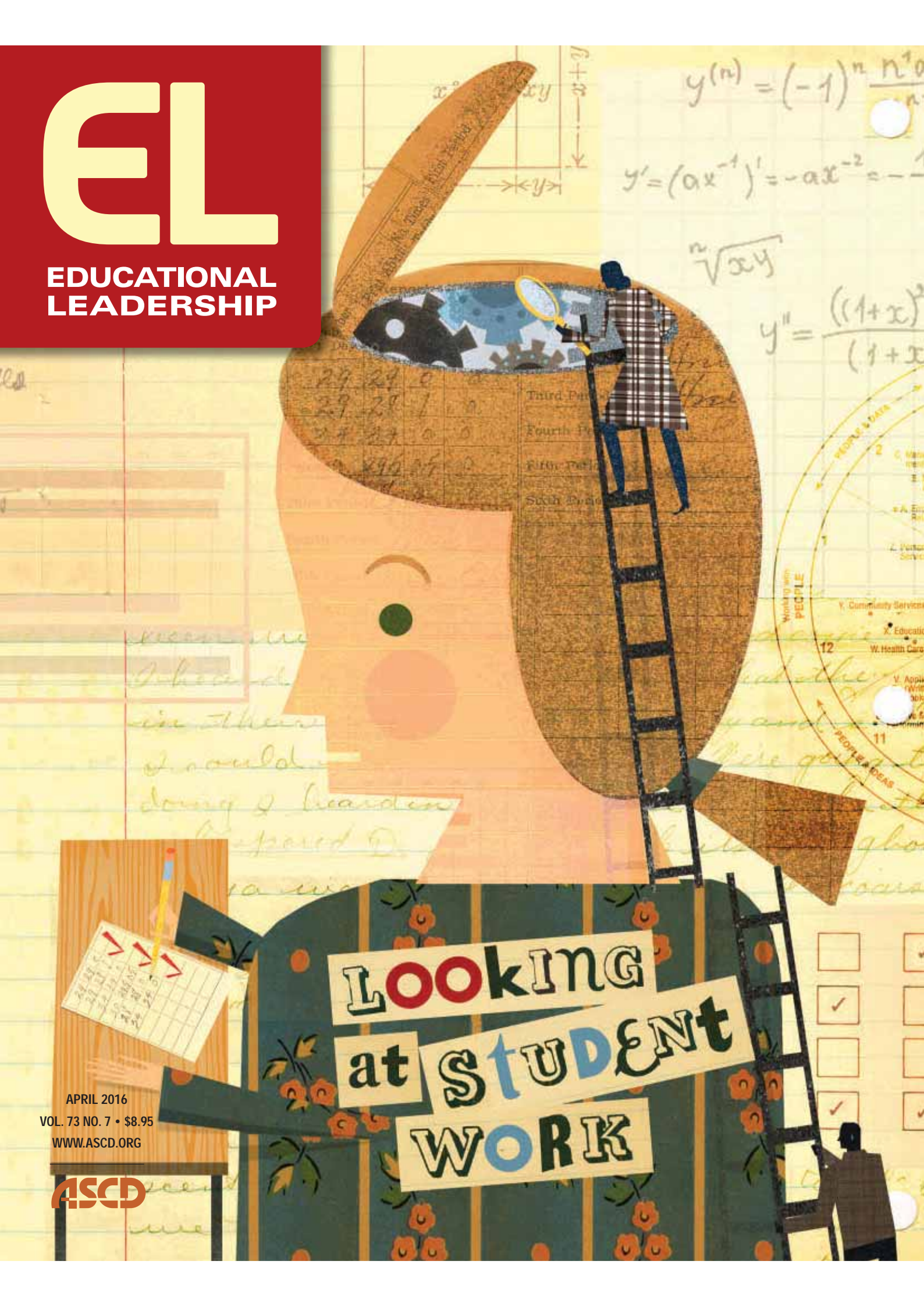


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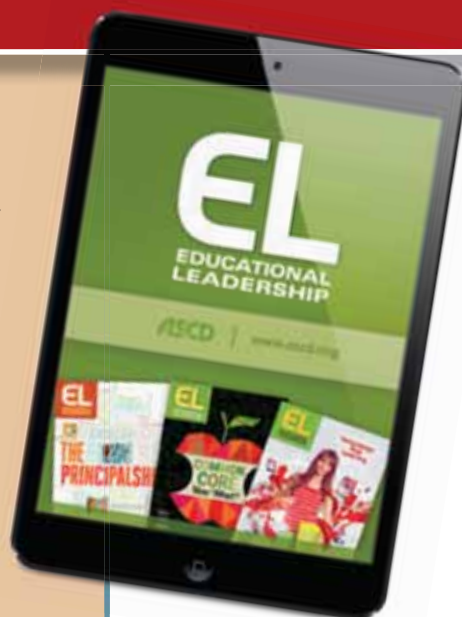
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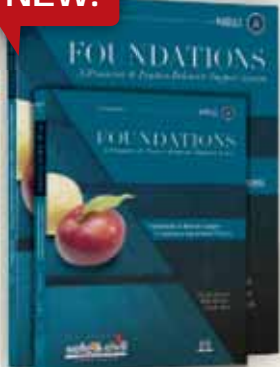
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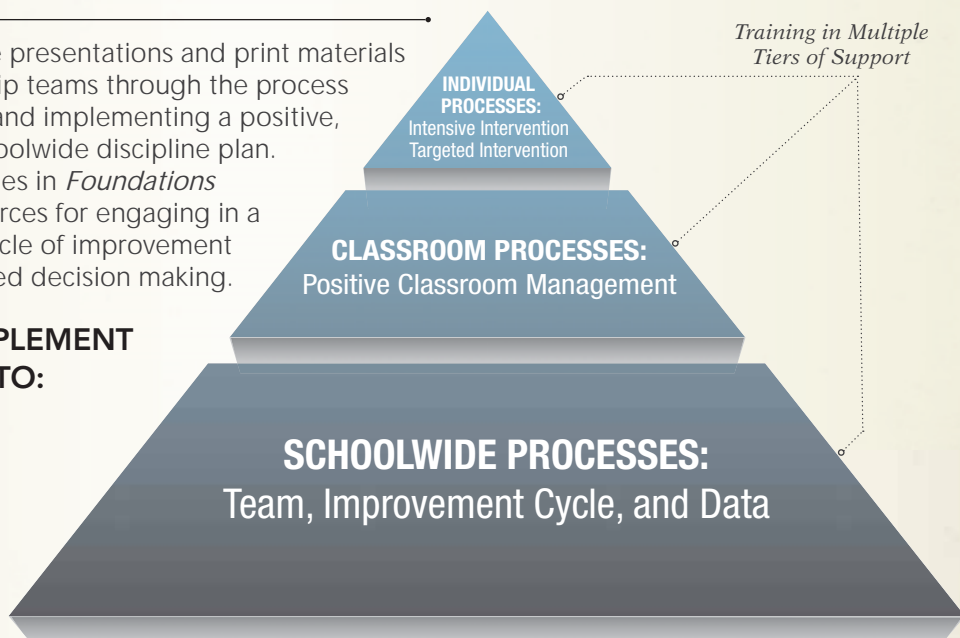
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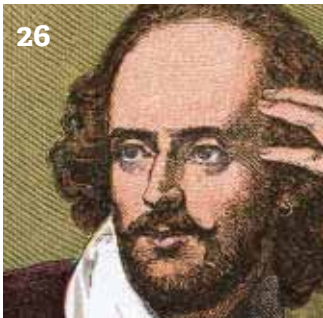
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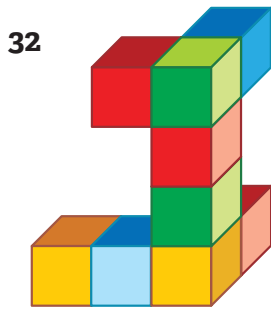
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Marge Scherer

## Reviewer, Critic, Teacher

All of us are reviewers these days—ready to give thumbs up or thumbs down to any movie, song, restaurant, political candidate, or cat video we like or hate. And now Facebook allows us to indicate “Wow!” “Ha Ha” and “Too bad” —all without writing a word. Judgment is so easy to express these days.

It is more time-consuming to give reasons for our thinking. If we want to be a convincing critic, we might need to gather evidence and examples and attempt to write entertainingly. But how about if we want to be a teacher and entice someone to improve his or her own work and/or submit something better the next time around? Now, that’s a tough job.

Often teachers try to act as reviewer, critic, and corrector all at once when they give feedback to students about their work, whether it is an essay, math problem, exit slip, or project. And because they often have 30 or more students—some of whom will wad up their graded papers before they leave the classroom—“looking at student work” can be a thankless and time-consuming task.

This issue is dedicated to exploring the art and science of responding to student work. Our authors examine the varied purposes for reviewing student work and present what research and best practice say about improving the effectiveness and efficiency of the feedback process. There are some surprising findings.

It is fine to use different review processes for different assignments. Some assignments can be designed to help you find out where students are

in their learning and may not need to be graded. Just looking for patterns of error or understanding will be helpful to you. Other assignments should be planned so that your students do the work of giving themselves feedback. In fact, as researcher Dylan Wiliam (p. 10) tells us, it’s sometimes good to let students consider error-finding as detective work. If they know they won’t have to correct all the mistakes they find, they may even find more potential improvements. An important consideration, he notes, is thinking about how to couch your feedback not only so students see how to improve but also so they want to do so. “The most important thing about feedback is what students do with it,” he notes.

It is not about how hard you work. Experienced teachers Cris Tovani (p. 56) and Catlin Tucker (p. 84) both had epiphanies about how many comments they wrote on students’ papers. Each flipped the process, so that they were helping students edit before they handed in their assignments. Rob Traver (p. 68) added a peer critique to his process and found that students who gave criticism to others applied it to their own work. Paul Bambrick-Santoyo (p. 26) describes how “writing first, talking afterwards” improved not only students’ literature discussions, but also their ability to read deeply.

Identifying learning progressions leads to insights. Jennifer Kobrin and Nicole Panorkou (p. 32) detail the relatively little known incremental steps that students take as they learn math skills. Knowing where the students are in specific stages of thinking

can help you make targeted decisions to advance students to the next stage. Gaining this expert pedagogical knowledge seems worthy professional development.

Description and prescription work best. Heidi Kroog and colleagues (p. 22) found that many teachers made repetitive comments on papers. They also found that too many comments were evaluative or corrective. The best comments let students know why something is not correct and how to improve it.

Your professional judgment outwits technology. In our special section, scholars Thomas Guskey and Jay McTighe (p. 38), W. James Popham (p. 44), and Thomas Guskey and Lee Ann Jung (p. 50) consider three current assessment practices that every educator needs to know more about: preassessment, standardized testing, and computerized grading systems. Before you give any of these processes a total thumbs up or down, be sure to read our authors’ counsel about how to use them well.

It’s not about the product; it’s about the student. And the final word of advice comes from Dylan Wiliam (p. 10): Ask kids for feedback on your feedback. Ask, How are you using my feedback? and What kind of feedback helps you most? When kids know how seriously you take their learning, they act on your advice. Essentially, feedback depends on being a good teacher, not a reviewer or judge.



Research Alert



As teachers increasingly assign projects and tasks that prompt students to show innovative thinking and creativity, a question emerges: How do we evaluate whether a student’s performance truly demonstrates creativity? In a recent article, creativity researchers Danah Henriksen, Punya Mishra, and Rohit Mehta seek to explain how to define and fairly measure creativity in student work.

The authors review existing reputable tests and instruments and discuss why few of these instruments work well for gauging creativity in K-12 student work. For instance, most instruments measure creativity as a psychological characteristic of an individual or decide whether a creative process unfolded, rather than evaluating a specific product. Quoting a previous study by Mishra

and Henriksen, the authors note, “Though we value the importance of process, as educators we have to develop better measures and rubrics to speak . . . systematically about the creative products that students develop.”

The authors developed a rubric template that can be used to evaluate where a piece of student work falls, on a scale of 1 to 5, in terms of three key aspects of creativity—novel, effective, and whole (meaning it shows an aesthetic dimension). Those aspects reflect the way that Henriksen and colleagues define creativity.

Find “Novel, Effective, Whole: Toward a NEW Framework for Evaluations of Creative Products,” in Volume 23, Number 3 of the *Journal of Technology and Teacher Education*, pp. 455-478.

Online Only

Work in Progress

Starr Sackstein’s *Education Week* blog, *Work in Progress*, has a seemingly endless supply of ideas to improve how we look at student work. During this school year, the high school English and journalism teacher from New York City has written

about topics such as replacing transcripts with portfolios, facilitating meaningful student-generated discussions, reviewing student work to norm your department’s expectations, and using Google Forms to allow students to weigh in on their peers’ work. Her blog is available at [http://blogs.edweek.org/teachers/work\\_in\\_progress](http://blogs.edweek.org/teachers/work_in_progress).



# NUMBERS OF NOTE

## Teachers' Time with Student Work

In a survey of more than 10,000 teachers, respondents were asked how many minutes they spend daily during the required school day grading, documenting, and analyzing student work.

Source: Scholastic and the Bill & Melinda Gates Foundation's *Primary Sources 2012: America's Teachers on the Teaching Profession*: [www.scholastic.com/primarysources/pdfs/Gates2012\\_full.pdf](http://www.scholastic.com/primarysources/pdfs/Gates2012_full.pdf)



19.4 minutes spent grading student work/preparing student report cards



15.4 minutes spent completing professional paperwork, filling out reports, and doing data analysis



About 36 total minutes per day spent grading, documenting, and analyzing student work

### Relevant Reads

**Thanks for the Feedback: The Science and Art of Receiving Feedback Well** by Douglas Stone and Sheila Heen (Penguin, 2014)

Every day we receive more feedback than we probably realize—from the smile on your significant other's face after you've cleaned the kitchen to the performance review you received at work. Stone and Heen explore why feedback is so difficult for many of us to process and how we can become better receivers of feedback.

The authors describe three types of feedback—appreciation, coaching, and evaluation—and why it's important that the giver and receiver agree on the purpose of the feedback at hand. For instance, a teacher who reaches out to her principal about a classroom management issue isn't looking for an appreciative pat on the back or an evaluative slap on the wrist; she wants coaching to solve the problem. Stone and Heen also explain what blocks us from receiving feedback well—truth, relationship, and identity triggers—and the blind spots and distortions we all have, but none of us likes to admit.

There are plenty of takeaways for educators here. We can explicitly teach our students to more skillfully receive input from teachers and peers (for example, how to effectively solicit feedback and navigate resulting conversations). And when we understand the science and art of receiving feedback, it will undoubtedly influence how we provide feedback. Feedback, after all, is a two-way street.

### Screen Grabs

## How Flipped Learning Improves Assessment

"If you flip your class, you might be able to rid yourself of the bane of many teachers: grading papers late at night," say Jon Bergmann and Aaron Sams in *Flipped-Learning Toolkit: 5 Steps for Formative Assessment*. Because students learn the content at home and practice in class, flipping frees up class time for immediate, one-to-one assessment.

In two videos with accompanying text, Bergmann and Sams describe how individualized assessment can work in a flipped classroom. After a student completes his or her work, the teacher does a *mastery check*, to find out whether the student truly "gets it" or still has some misconceptions or partial understandings. Students move on only when they've achieved mastery.

The toolkit is available on Edutopia at [www.edutopia.org/blog/five-steps-formative-assessment-jon-bergmann](http://www.edutopia.org/blog/five-steps-formative-assessment-jon-bergmann). Find additional information in Bergmann and Sams's book *Flip Your Classroom: Reach Every Student in Every Class Every Day* (ISTE & ASCD, 2012).

### PageTurner

Most of the time, the student work we're looking at is not important in and of itself, but rather for what it can tell us about students.

—Dylan Wiliam, p. 12

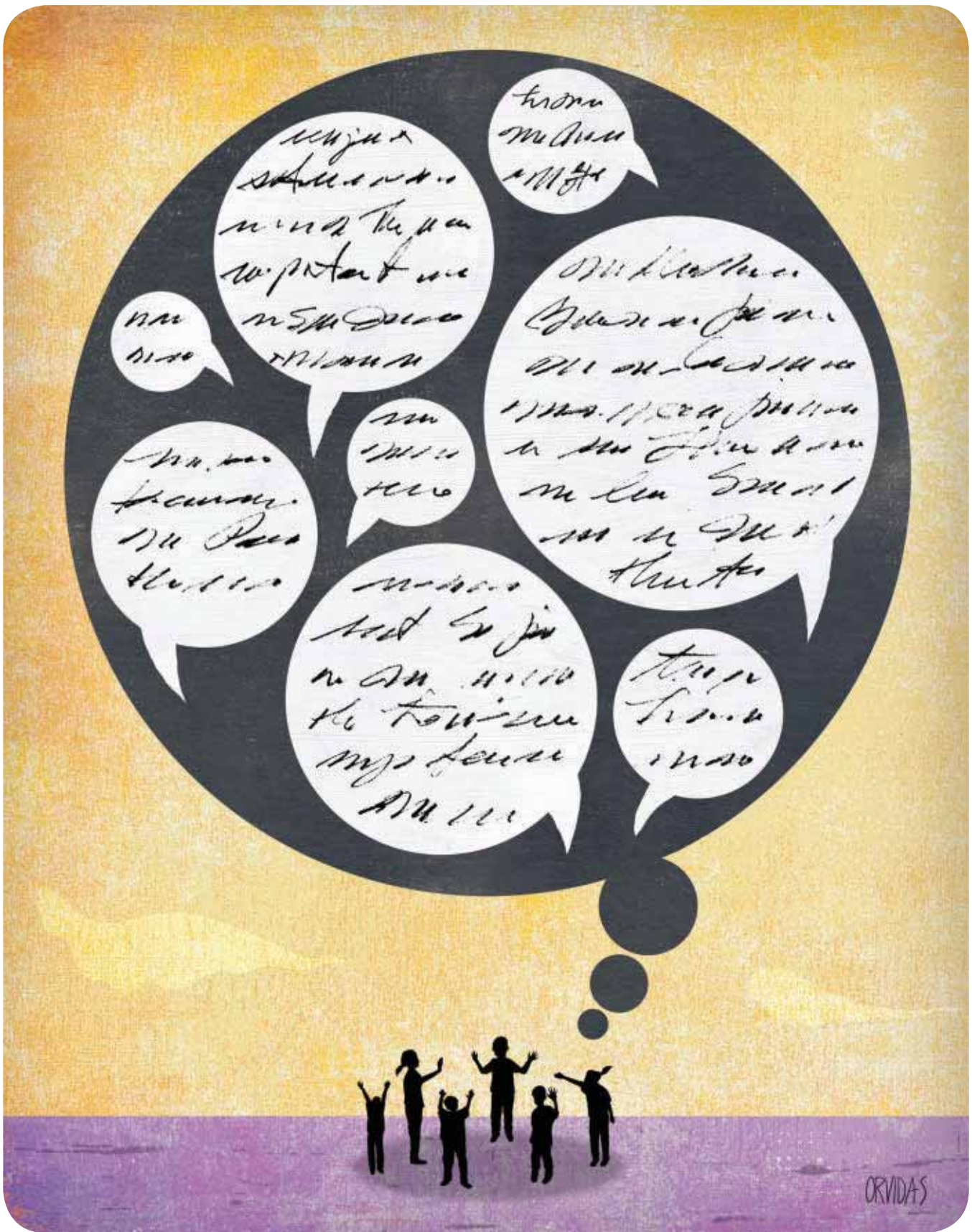
# The Secret — of — Effective FEEDBACK

*Feedback is only successful if students use it  
to improve their performance.*

**Dylan Wiliam**

It's a universal process in education—so universal that we regularly fail to appreciate its complexity. Here's how it goes: (1) A teacher looks at a piece of student work; (2) The teacher writes something on the work (sometimes a grade, sometimes a score, sometimes a comment); and (3) Later, the student looks at what the teacher has written.

Of course, the idea is that what the teacher has written on the student's work improves the student's learning. But as many studies have shown, students often learn *less* when teachers provide feedback than they do when the teacher writes nothing (Kluger & DeNisi, 1996). The apparently simple process of looking at student work and then giving useful feedback turns out to be much more difficult than most people imagine. We could make the whole process considerably more effective by understanding one central idea: The only important thing about feedback is what students do with it.





### Keeping Purpose in Mind

In psychology and education, it is common to define *feedback* as any actions taken by an external agent to provide individuals with information regarding some aspect of their performance. At its simplest, therefore, feedback might identify the quality of the work, as happens when a typing teacher tells a student that his typing speed is 45 words per minute. More helpfully, the feedback might indicate the gap between the current performance and the desired performance—for example,

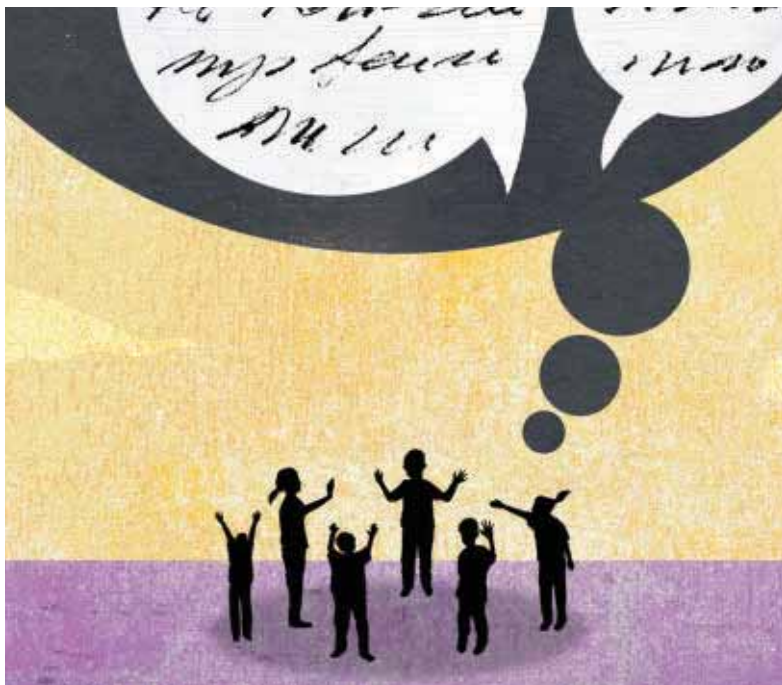
how to develop a piece of sculpture or a painting, and a language arts teacher might give feedback on the draft of a story so the next draft is better.

In general, however (and this is what makes feedback so challenging), the main purpose of feedback is to improve the student's ability to perform tasks he or she has not yet attempted. If the language arts teacher advises the student that his story would be improved by swapping around the third and fourth paragraphs, the student can do this, but he will learn little. The intellectual heavy lifting has been done by the teacher, not the student. Similarly, if a math teacher corrects a student's arithmetic errors, there's nothing left for the student to do but note how many of her calculations were incorrect. It's easy to see why such forms of feedback are unlikely to be effective. And if we don't keep the purpose of feedback in mind, the same problems may also crop up in more subtle ways.

For example, many school districts allow students to revise assessed pieces of work and resubmit them for a higher grade after receiving feedback from teachers. Such a system can create incentives for students to turn in poor-quality work, wait for the teacher to tell them how to improve it, and then just follow the instructions. The feedback *has* improved the work, but the student has probably not learned much from the process.

The real issue is purpose. Why are we looking at student work in the first place? Sometimes we *do* want to focus on improving the existing work. For instance, when I'm reading a final thesis draft from one of my PhD students before it goes to the book-binder, it would be rather perverse for me to just tell the student that I saw a typographical error in one of the equations on page 36. It's possible that the student would learn something by checking the equations on page 36 and locating the error herself, but given this particular context, it would be far more sensible for me to tell the student what the error was.

Most of the time, however, the student work we're looking at is not important in and of itself, but rather for what it can tell us about students—what they can do now, what they might be able to do in the future, or what they need to do next. Looking at student work is essentially an



by also telling the student that his target speed is 50 words per minute. More helpfully still, the teacher might tell the student that his typing speed will increase if he uses only his thumb to depress the space bar. In other words, the best feedback provides information not just about current performance, but also about how to improve future performance.

In the typing example above, and in most sports coaching, this point is obvious. When a coach gives a softball pitcher feedback on her pitching action, it's clear that the purpose of the feedback is to help the player improve her pitches. This is also true in many school subjects. For example, a visual arts teacher might give a student advice on

assessment process. We give our students tasks, and from their responses we draw conclusions about the students and their learning needs.

When we realize that most of the time the focus of feedback should be on changing the student rather than changing the work, we can give much more purposeful feedback. If our feedback doesn't change the student in some way, it has probably been a waste of time.

### Giving Feedback They Can Use

There's an old joke about a driver lost in a remote region, trying to find a way to get to the city. Eventually, he asks a local about how to get there. The local replies, "Well, if I were you, I wouldn't start from here." It's a joke because we can see that this is not a particularly helpful thing to say. The driver has no other choice but to start from where he is.

Yet, we do this to our students all the time. We say things like, "You should be able to do this. You're in 5th grade"—which, when you think about it, is not helpful. The crucial insight here was captured by David Ausubel (1968) many years ago:

The most important single factor influencing learning is what the learner already knows. Ascertain this and teach . . . accordingly. (p. vi)

In other words, we need to start from where the learner is, not where we would like the learner to be. We need to use the information we obtain from looking at the student's work—even through that information may be less than perfect—and give feedback that will move the student's learning forward. Here are a few suggestions about how teachers might do this.

### Assign Tasks That Illuminate Students' Thinking

Sometimes, we just want to know whether students can do something. In such situations, it's perfectly appropriate to give them a task that simply tells us whether they can do it or not. However, most of the time, we want to know more than that. We want to know how we can help them get better, and this requires that we carefully

design tasks to illuminate each student's thinking.

In language arts and social studies, most tasks are so open that we almost always learn something about a student's thinking by looking at his or her work. For example, even that traditional essay so hated by students returning from vacation, "What I did on my holidays," will provide insights into a student's writing capabilities. In social studies, in responding to a question such as "Why did the Union army want to capture Atlanta?" students are likely to reveal the extent of their understanding of Atlanta as a transportation and logistics hub. However, in math and science, looking at students' work often tells us only that they didn't do it very well and they need to do it again, but better. Designing tasks that, in Ritchhart and Perkins's

The apparently simple process of looking at student work and then giving useful feedback turns out to be much more difficult than most people imagine.

(2008) phrase, "make thinking visible" takes time, but front-loading the work in this way makes it much more likely that we'll provide useful feedback.

For example, the question below probes students' understanding of the arithmetic mean of a set of numbers. However, rather than asking students to calculate the mean of a set of numbers, as most standardized tests do, the question explores whether the students really understand the *concept* of the mean:

What can you say about the means of the following two sets of numbers:

Set A: {2, 5, 12, 7, 0}

Set B: {2, 5, 12, 7}

- The two sets have the same mean.
- The two sets have different means.
- It depends whether you choose to count the zero.

Many students choose option (c), which is, of course, incorrect. It takes authentic understanding

of the definition of the mean to realize that there is no discretion about whether to count the zero. The only correct response is option (b).

Similarly, in science, the following question helps teachers figure out whether students understand the important distinction between climate change in general and the specific issues related to the depletion of the ozone layer through the use of chlorofluorocarbons.

What can we do to preserve the ozone layer?

- (a) Reduce the amount of carbon dioxide produced by cars and factories.
- (b) Reduce the greenhouse effect.
- (c) Stop cutting down the rainforests.
- (d) Limit the numbers of cars on the road when the level of ozone is high.
- (e) Properly dispose of air conditioners and fridges.

**If our feedback doesn't change the student in some way, it has probably been a waste of time.**

What's particularly interesting about this question is that option (e) may look like a fifth option included just to increase the number of choices, but in fact it's the only correct response.

To be sure, no matter how carefully or deeply you probe, you can never make thinking wholly visible. Sometimes you're going to get it wrong. But at least by trying to get a handle on the student's thinking, you're giving yourself the chance to get it right more often than not. Major league hitters are happy getting things right three times out of ten. Don't beat yourself up.

#### ***Make Feedback into Detective Work***

One way of making sure that students actively use feedback is to make responding to the feedback a task in itself. In other words, make feedback into detective work.

In a previous article in *Educational Leadership* (William, 2012), I mentioned Charlotte Kerrigan,

a language arts teacher who sometimes responds to her students' essays by writing her comments on strips of paper. She then gives each group of four students their four essays, along with the four strips of paper. The group's task is to figure out which comments apply to which essays.

Or consider a math teacher who provides feedback on 20 solved equations. Rather than telling the student which equations are incorrect, the teacher can instead say, "Five of these are incorrect. Find them and fix them."

The same basic principle can be applied to any school subject. For example, in social studies, if a student has included the Emancipation Proclamation as one of the causes of the U.S. Civil War, instead of telling the student that the Proclamation was issued in the second year of the war, the teacher could point out that one of the causes he has mentioned can't be a cause because it occurred after the start of the war, and ask the student to sort this out.

Such practices ensure that students, the recipients of feedback, do as much work as the teacher who provides the feedback. Making feedback into detective work encourages students to look at the feedback more closely and to think about their original work more analytically.

#### ***Build Students' Capacity for Self-Assessment***

The amount of feedback we can give our students is limited. In the longer term, the most productive strategy is to develop our students' ability to give themselves feedback. With adults, we do this intuitively. Whenever I observe a lesson by a student teacher, the first question the teacher asks me is, "How did I do?" My response—and the response of most administrators I know—is, "How do you think you did?" If the teacher knows what he or she did well and what still requires work, then my feedback is irrelevant. More important, teachers who can critique their own performance can improve when nobody is observing them.

In my work with music teachers, I've seen the importance of self-feedback. Instrumental music teachers commonly get only 20 to 30 minutes each week with a student. But these teachers realize that most of the progress a student makes in playing a musical instrument happens when the student practices at home. A student could improve his



or her performance very little in 30 minutes a week. Therefore, many instrumental music teachers spend most of their instructional session ensuring that students have the skills to practice productively—which requires that students can evaluate how well they’ve performed and make adjustments accordingly. Contrast this approach with most content-area teaching in schools, where teachers seem to believe that students make most of their progress when the teacher is present, with homework as a kind of optional add-on.

It’s important, therefore, to develop students’ capacity for self-assessment. At the same time, we need to remember that it can be emotionally challenging to assess one’s own work. Therefore, I recommend starting with samples of anonymous student work, and asking students to describe what feedback they would give the creator of the work. After that, students can move on to the work of actual peers, and finally, to self-assessment.

To start with, a simple approach, sometimes called “plus, minus, interesting,” is all that is needed. At the end of a task, ask students to identify something they found easy about the task, something they found challenging or difficult, and something they found interesting. Such reflection develops language skills and helps the students become clear about what areas they need to work on.

With any task that has a qualitative element rather than just being correct or incorrect, students can be asked to identify what they would do differently if they did the task again. In science, for instance, students might be prompted to think about what they would change to improve a science experiment they conducted. In mathematics, students might be asked how they might report the result of a mathematical investigation differently. Sometimes it’s appropriate to ask students to make the changes they have identified, such as redrafting a literary essay in language arts. Sometimes, however, it’s useful to tell students in advance that they won’t have to make the improvements they’ve identified, so they don’t have an incentive to say that the work is fine as it is.

The purpose of this exercise is to develop the student’s own critical eye. Once a student has that, feedback from others becomes less and less necessary.

**To receive feedback in a meaningful way, the student needs to trust the teacher.**

### **A Trusting Relationship for Feedback**

In the end, it all comes down to the relationship between the teacher and the student. To give effective feedback, the teacher needs to know the student—to understand what feedback the student needs right now. And to receive feedback in a meaningful way, the student needs to trust the teacher—to believe that the teacher knows what he or she is talking about and has the student’s best interests at heart. Without this trust, the student is unlikely to invest the time and effort needed to absorb and use the feedback.

The only thing that matters is what the student does with the feedback. If the feedback you’re giving your students is producing more of what you want, it’s probably good feedback. But if your feedback is getting you less of what you want, it probably needs to change.

Finally, talk to your students. Ask them, “How are you using the feedback I’m giving to help you learn better?” If they can give you a good answer to that question, then your feedback is probably effective. And if they can’t, ask them what they *would* find useful. After all, they’re the clients. ■

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# Do They Hear



# You?

*To make sure students will accept and use feedback, integrate these three strategic moves into your instruction.*

**John Hattie, Douglas Fisher, and Nancy Frey**



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**F**eedback is powerful. In fact, research suggests that feedback can be one of the most effective instructional strategies for improving student performance and closing achievement gaps (Hattie, 2012). Unfortunately, although getting teachers to provide feedback is relatively easy, getting students to receive that feedback is complicated.

In our experience, students who actually receive feedback are usually willing to use it. Why doesn't this happen more often? One problem is bias—like all of us, students seek feedback that boosts their self-image. If feedback is vague and personal, they may selectively accept only positive comments (“Great job! You’re so smart!”) and defensively reject negative comments (“This paragraph is confusing, with some awkward sentences”). What’s worse, neither of these kinds of “feedback” is actionable; they do nothing to inform the student about what he or she should do in the future.

It’s not easy to break through the walls that everyone has about receiving feedback, but it’s well worth the effort. Here are some approaches that can help ensure that your feedback will be received.

### **Establish Clear Success Criteria**

We cannot overstate the importance of setting clear expectations for learning. To make the most of feedback, teachers and students must understand what success looks like. When students are able to

compare their performance with a clearly understood criterion for success, they are more likely to accept and value the feedback the teacher provides to help them reach that goal.

For example, teacher Melanie Strauss wanted her world history students to understand the specific events that influenced the rise of the empires of Austria-Hungary, Great Britain, and Russia in the 18th century and to use this information to gain insight into world events today. From their work in the instructional unit so far, her students understood the concept of an empire. They had studied the empire building of these three countries, and they had compared international timelines to explore the idea that history happens simultaneously all over the world. Ms. Strauss began a new lesson by saying,

Remember the CNN Student News page from last week about Russia? The annexation of Crimea from Ukraine by the Russian Federation has its roots in the Russian Empire dating back to the 1780s. It’s still relevant. When you know the history behind the development of a country, you can get a sense of what their citizens value and why. Your challenge is to identify and explain *why* strong central governments dominated Europe by 1750. When you can answer this question, you’ll be ready to figure out why relations between Austria-Hungary, Great Britain, and Russia changed as they fought for dominance.

In this introduction, the teacher communicated her learning intention, attempted to make the learning relevant



for students, and provided a definition of success for the day. In the lesson that followed, her students worked in small “expert” groups to identify the changes for their assigned empire. Ms. Strauss had populated the online learning management system with several articles and websites about each country, as well as commentaries from historians about this time period. The students were tasked with reading and taking notes on several documents

to examine how the countries changed geographically, politically, economically, and socially. Then they reconvened in home groups to compare similarities and differences among the three empires. Each home group proposed a hypothesis for why central governments rose to prominence at this time, citing evidence the students had first formulated in the expert groups.

During the discussions, Ms. Strauss

information so they could check if they wanted.” The students welcomed her feedback because it was delivered just when they needed it to reach their clearly understood success criterion.

Here’s another example. Students in a 3rd grade class were writing opinion papers. They had studied a number of ways in which writers can use lead sentences to engage their readers.

In the current lesson, their teacher wanted them to learn about writing for an audience. She said,

Today, you’ll have a chance to write your lead three different ways so that you can determine the best way to start. You’ll get a chance to talk with three different classmates about your leads so that they can tell you which ones they think work the best and why. Then the choice is yours. You’ll know you are successful when you have selected a lead for your paper that captures your audience’s attention, and when you can explain why you chose it.

Again, the teacher’s clarity invited students into the lesson and opened the door for accepting and valuing feedback from others as students took ownership of their learning.

### **Provide Different Kinds of Feedback**

Feedback should help students answer three questions (Hattie, 2012): *Where am I going* (what are the success criteria)? *How am I going* (what progress am I making toward those goals)? and *Where do I need to go next?* By keeping these questions in mind and providing different kinds of feedback depending on what the learner needs at the time, teachers can ensure that their feedback is robust and meaningful.

We’ve already discussed the importance of addressing the first question—*Where am I going?*—by providing clear success criteria. Feedback to

Although getting teachers to provide feedback is relatively easy, getting students to receive that feedback is complicated.

offered feedback to the groups, helping students identify what additional information they would need to refine their ideas and writing. As she met with one group, she noticed that they had included little evidence in their draft. Rather than simply telling them to add more evidence, she said, “I’m thinking that your readers might disagree with one of your statements. How could you make it more convincing?”

Arturo immediately answered, “We should say where we got the infor-



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address the second question (How am I going?) may be related to three factors (Hattie & Timperley, 2007):

■ *The learner's success in doing the task.* This kind of feedback is the most frequently given, as it speaks directly to the success criteria. It helps students note where and when errors were made, but more important, it helps them understand and correct those errors. To prepare for giving feedback about the task, ask yourself such questions as, Does the student's answer meet the success criteria? What did he or she do well? Where did he or she go wrong? What other information is needed to meet the criteria?

■ *The processes the learner is using.* The purpose of feedback at this level is to guide students to self-correct their own cognitive operations. We want our students to ask themselves, How did I get here, and where am I going next? In preparing to give students feedback about the processes they have used, ask yourself, What is wrong and why? What strategies did he or she use? What is his or her understanding of the concepts/knowledge related to the task?

■ *The self-regulatory habits the learner is developing.* As students deepen their knowledge of a topic, they are increasingly open to feedback that challenges them to reflect on the metacognitive processes they used to learn the content. Ask students questions such as, What happened when you . . . ? What further doubts do you have regarding this task? How have your ideas changed?

For example, Ryan Knight, an 11th grade English teacher, shifted the kinds of feedback he gave his students over a three-week unit during which they read, discussed, and analyzed a number of 20th century short stories. "I often provide them with feedback



## We want our students to ask themselves, How did I get here, and where am I going next?

about the task throughout the unit, but even more so in the beginning," he said.

Some of this early feedback was focused on the students' success in performing the task. For instance, when students practiced writing thesis statements, Mr. Knight wanted them to understand that these statements should set up an argument, not just present facts. Before students began writing a short essay on Flannery O'Connor's "A Good Man Is Hard to

Find," he asked them to draft a thesis statement and turn it in as an exit slip. The next day, he read some of the students' responses to this prompt without identifying the writers, posing questions like, "What is this student doing well?" and "Where does this student need improvement?" After the class discussion, students edited their own thesis statements to better meet the success criterion. One student's original thesis state was *In the short story "A Good Man Is Hard to Find," Flannery O'Connor contrasts what a "good man" is through the relationship between the grandmother and the Misfit.* After participating in the feedback session, the student recognized that this sentence was factual but did not set up an argument. He revised it, writing, *In "A Good Man Is Hard to Find," Flannery O'Connor uses the relationship between the grandmother and*

*the Misfit to comment on the high price that society pays when a life is lived selfishly.*

As students' content knowledge deepened, Mr. Knight's feedback shifted as well. In addition to focusing students' attention on the task itself, he posed questions about processes used by the student writers. He asked such questions as, "The response is correct, but why is it correct?" He would also read passages from several student essays and ask, "What do these have in common?" to help students develop the cognitive habit of looking for patterns. For example, one pattern that students noted focused on explanations for quotes. As Mykela commented, "In the examples we like better they always have a sentence to explain what the quote means. It makes a connection from the quote to the topic. The ones we don't like so much just have random quotes stuck in the paper."

Toward the end of the unit, Mr. Knight intentionally shifted his feedback to focus on the self-regulatory habits he was trying to develop in his students. These metacognitive behaviors are important because students who become skilled at thinking about their thinking are more likely to take their learning with them from year to year. Unlike cognitive tasks, such as remembering information or comparing and contrasting ideas, metacognitive tasks involve strategically planning how to complete a task, matching specific skills and strategies to the task, monitoring one's own understanding, self-assessing performance, evaluating progress toward the completion of a task, and self-correcting as the task is completed.

For example, Mr. Knight asked his students to journal about their approach to writing thesis statements. He asked them to "consider what you

## To make the most of feedback, teachers and students must understand what success looks like.

do when you receive a writing prompt. How do you approach the task, and is that working for you?" As he read their reflections, he noted that several students included ideas that they could use in the future, but a few students just summarized what they did for the current topic. Mr. Knight knew that he needed to meet with the latter group to help them think more strategically.

At another point, he asked the class to assess their performance, saying "I am sorry to interrupt your great work, but I would really appreciate it if you could stop and reflect on your success. What's working for you, right now, and what's not?" He invited students to share and provided them with commentary about their success.

Andrew said, "I think what's working for me is having my notes and annotations here while I write. I don't have to reread to find everything because I can just read my own notes to remember what I was thinking when I read it before. That makes me realize that I should step up my annotations because it makes things easier for me later." Mr. Knight commented, "That could be a useful process for you. I hope you'll try it out and monitor yourself to see if it's working."

### **Promote Students' Listening Skills**

If students aren't skilled in listening, they won't benefit from feedback.

The well-known listening skills that students are often taught—such as tracking the speaker, monitoring body language, and not interrupting—are important, but not sufficient. These outward signs can mask a lack of attention to the feedback being given. There's a significant difference between hearing and listening. True listening requires attending to the message, not just looking like one is interested and understands.

Two conditions can help cultivate students' capacity to listen to feedback across their entire school career. The first condition is that structured feedback should occur regularly. To make students conscious of the role feedback plays in their learning, we should schedule formal feedback sessions, including frequent short conferences between teachers and individual students.

The second condition is to teach students how to paraphrase the feedback they receive, thereby demonstrating that they understand it. This can occur regularly as a part of the informal feedback conversations teachers have with students. After giving a student feedback about a piece of work, try asking the student to repeat your comments back to you in his or her own words so that you can confirm that he or she understands and knows what to do next.


Of course, students will be more confident in paraphrasing if they see it explicitly modeled by their teachers. Kindergarten teacher Francesco Calderón regularly features a conversation station as part of his centers rotation (Bond & Wasik, 2009). The teacher has a list of questions he asks the children who visit the center. For instance, he asks them, "Tell me about what you do when you go to the grocery store," and listens carefully to their replies. Mr. Calderón then para-



phrases what each student has said. “Tell me if I am correct, Emory. What I heard you say is that when you go to the grocery store . . . .” Sometimes he makes deliberate errors so he and the students can talk about what he can do to improve his listening. “They learn by explaining what they hear,” he said. “As the year evolves, we begin to talk about their work, and they bring examples to the conversation station. What begins as simple conversations and paraphrasing becomes guided practice with providing critiques and feedback to one another.”

### Powering Up Feedback

There’s no doubt that providing feedback to students can be useful. But we’re concerned that many students do not receive the feedback that has been

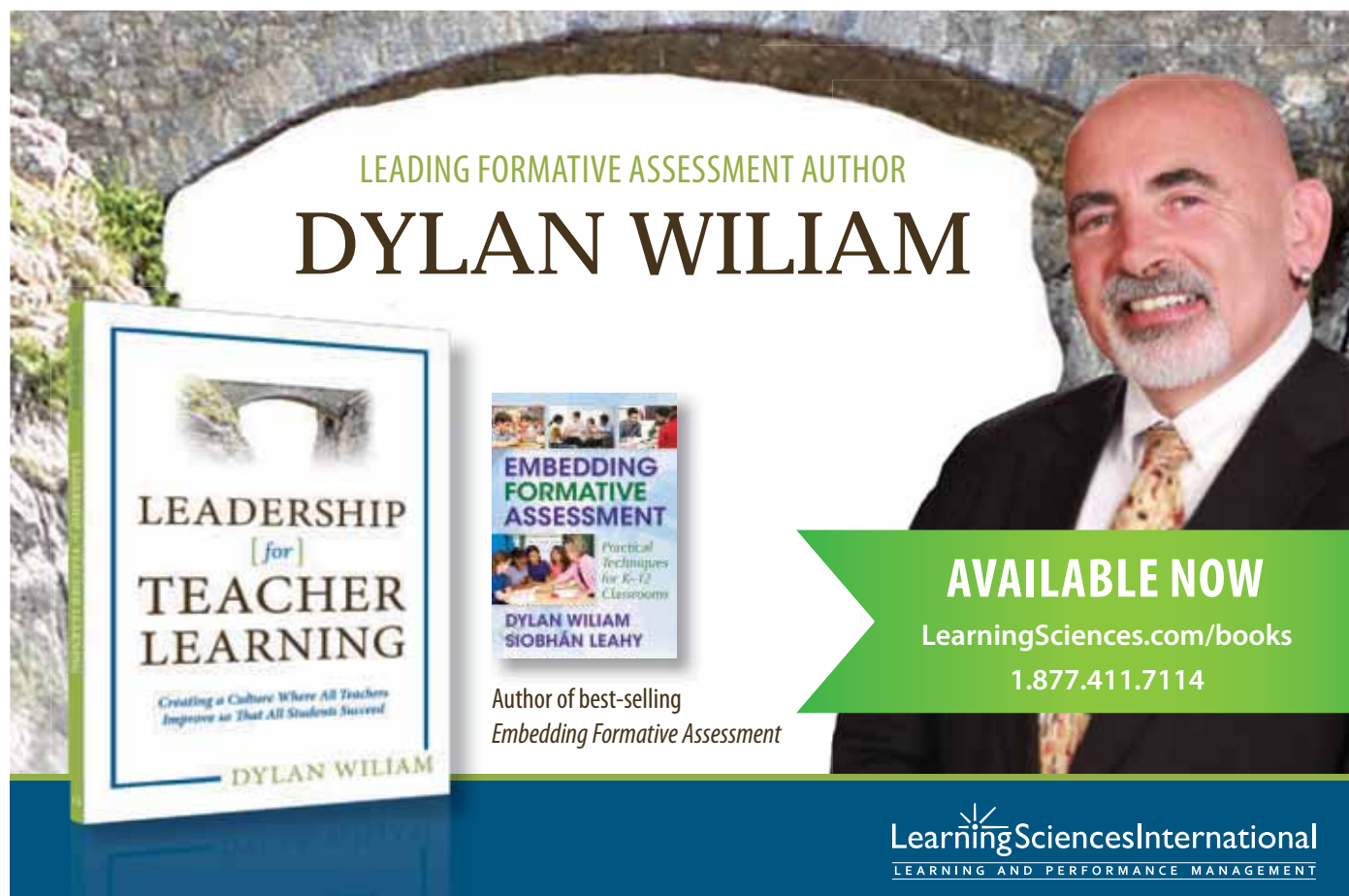
provided. Our experience and review of research suggest that these specific strategies—clarifying the learning intentions and success criteria, matching the level of feedback with the task, and teaching listening skills—can increase the likelihood that students will use feedback. Together, these actions can put more power behind feedback and thus improve students’ learning. 

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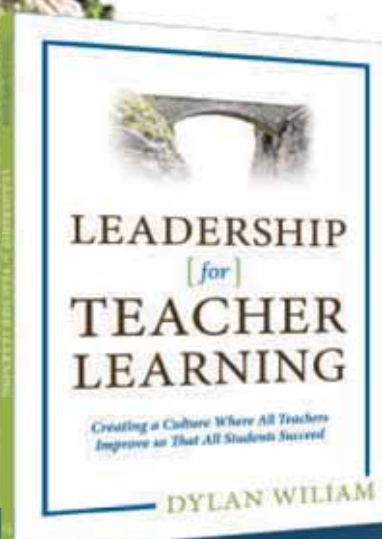
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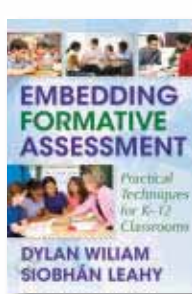


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# THE 2 Es

Implement  
**EFFECTIVE**  
and **EFFICIENT**  
approaches to formal  
formative assessment  
that will save time  
and boost student  
learning.

**Heidi Kroog, Kristin King Hess,  
and Maria Araceli Ruiz-Primo**

Imagine that you are at a crucial juncture in an instructional unit. It is absolutely essential for students to understand the material covered so far; otherwise they will struggle with the upcoming topics. You would like to give students a task that identifies both what they know and can do and what they are struggling with, so that you can provide feedback and make instructional modifications. How can you design and conduct this activity to make the most positive impact on student learning? In other words, what are the characteristics of effective and efficient formal formative assessment?

As part of a five-year research project funded by the Institute of Education Sciences, our research team interviewed, observed, and videotaped 20 middle school mathematics and science teachers every day during 26 entire instructional units. (Some teachers were observed more than once.) We also interviewed a random sample of about 30 percent of students in these classes and collected 3,459 student work samples. Here we describe what we learned about formal formative assessment.

## **Defining Formal Formative Assessment**

Formal formative assessment activities are planned in advance, designed to gather information from all students in the class at the same time, and intended to move students forward by providing feedback or instructional adjustments. Some testing companies portray formal formative assessment as only involving an embedded test in the middle of the unit. However, we use the term *formal* as meaning a planned opportunity for all students to share what they know and can do. These activities can take many forms, including homework assignments, exit tickets, and handouts. As an example, in one of the 6th grade math classes we observed, the teacher asked students to complete an exit ticket with the following task: Draw two shapes—one rectangle and one square—so that each has a perimeter of 12 units.

These assessments are only truly formative when they improve student learning. A teacher who carefully designs, plans, and implements a task but doesn't act on the results is not fully engaging in formative assessment. How can we, as educators, set ourselves up to collect meaningful information and then capitalize on it to move students forward?

### Windows into Student Thinking

When we design questions or activities that help us understand *how* students arrived at an answer, we can be more precise about our next instructional steps. For example, knowing that a student has incorrectly identified which of two fractions is larger is not as informative as knowing that the student only considered the denominators in making her decision (Wiliam, 2011). Only the latter information can help us know where to focus our time and efforts. The key is to create activities and ask questions that make students' thinking explicit.

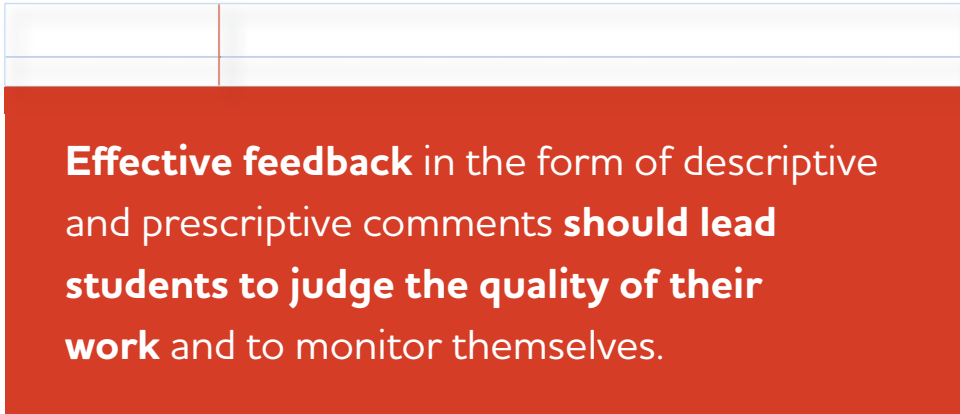
The most informative questions require students to explain their answers, elaborate on their responses, or provide information about why they think something. Sometimes teachers ask multiple questions with increasing focus to help identify the source of confusion. Some of these questions include Why does \_\_\_\_?, How would you \_\_\_\_?, Could you explain \_\_\_\_?, and Why is \_\_\_\_ an example of \_\_\_\_? These prompts can provide insight into not only what students know, but also how they know it (Stobart, 2014).

In our study, we learned that only a small portion of the work teachers graded was designed to make students' thinking explicit by revealing students' naive conceptions, mistakes, misapplications, and common mathematical errors (14 percent). Instead, the majority of teachers' efforts were spent grading work that was designed for students to practice something (52 percent) or grading summative assessments like end-of-unit exams (24 percent).

### A Prescription for Feedback

After we've collected student work, we need to carefully select what's worth our time to read and how we'll comment on it. What kind of feedback is both effective and efficient?

Face-value comments that only evaluate student work—for instance “good” and “not quite”—are not worth our time. If we write “good” on a student's paper, he won't know what, exactly, was good about his work. If we simply write “not quite,” it may not be completely clear how the student can improve.



**Effective feedback** in the form of descriptive and prescriptive comments **should lead students to judge the quality of their work** and to monitor themselves.

Instead, we should aim for comments that are both *descriptive* and *prescriptive*. A *descriptive* comment, such as, “Good explanation. You are providing data as evidence to support your claim,” lets the student know why something was correct or incorrect. A *prescriptive* comment, for instance, “Do you have a claim? Where is your evidence? Provide some justification that supports your claim,” helps the student know how to improve.

We also know that both writing comments and providing scores on papers minimize the impact of the comments (Butler, 1988; Wiliam, 2011). Students tend to pay attention to the scores and ignore the comments. So if we assign a formal formative task that we plan to provide comments on, it's best to forgo a score. Additionally, not all feedback should focus on content. Comments can also be helpful when they address overarching problem-solving or learning strategies, such as, “When you answer questions at the end of a lab,



Although repeating the same comment may seem economical, **it is often more efficient to take action with a group of students.**

make sure to review your observation notes, data, and analysis before writing your answers.”

Across all of the student work samples we collected that included teachers' comments, only 28 percent of student work featured comments that were either descriptive or prescriptive. The remaining 72 percent included only lower-level comments, such as those that were evaluative or corrective—the type that aren't very helpful to students. Instead, effective and powerful feedback should be concrete, specific, and useful; it should provide actionable information. Effective feedback in the form of descriptive and prescriptive comments should lead students to judge the quality of their work and to monitor themselves as they produce new work.

### **Moving Forward with Instruction**

In our study, we found that teachers tended to repeat written comments from one student to the next. In other words, when different students made the same mistake, teachers recycled the same comment over and over again. We found repetitive comments in 72 percent of all products in which teachers left some type of comment. Although repeating the same comment may seem economical (you don't need to generate a unique comment for each student), it is often more efficient to take action with a group of students who all made the same mistake to model how to approach a problem.

When teachers model a problem and students help solve it, the process reinforces what students know or redirects what they are doing wrong. Even better, we can emphasize strategies that will help students check themselves the next time they are faced with a similar task. A teacher might say, “Before you add your numbers, remember to align the number by the decimal point.”

In addition to making instructional modifications, we can

share with students how they are doing as a class. One way to do this is to provide percentages of how many students responded correctly to each question. This immediately shows students what questions they struggled with the most. We can take the opportunity to discuss why and also what they can do to help one another.

Teachers can provide a general description of what students tended to miss, such as, “Most of your reports missed a description of the control variable. Why is this information important, and why should we not miss it?” Discussing results at the whole-class level helps students understand where they are now and what they need to focus on. Plus, it's more effective to discuss *why* an answer is correct or incorrect than to provide only correct answers or to hand students their reviewed products without further discussion.

### **Balancing Efficiency and Effectiveness**

So what are the key ways to maximize your time and improve student learning?

■ *When you administer formal formative assessments to get a sense of students' thinking, choose a few well-designed questions or prompts.* If you won't review all of the questions, there's no point in asking them. A few well-designed questions are better than many superficial ones. You will want to be able to quickly review students' work and identify their strengths and weakness.

### **EL Online**

For tips on how to use protocols to guide group discussions of student work, see the online article “Making Protocols Work” by Tina Blythe and David Allen, at [www.ascd.org/el0416blythe](http://www.ascd.org/el0416blythe)

In our study, a middle school math teacher asked students to solve one multiplication problem:  $2\frac{1}{9} \times \frac{11}{16}$ . The teacher selected this problem because it requires students to complete all the potential steps that might occur when multiplying mixed numbers, including converting a mixed number to a fraction and multiplying two-digit numbers in the numerators, as well arriving at a product that is an improper fraction and deciding what to do with an improper fraction that can only be reduced to a mixed number. With just this one question, she could very quickly see where students were getting hung up.

■ *Briefly review the students' work to determine whether a number of class members made the same mistakes or displayed the same misunderstanding.* If all or almost all students made the same mistake, consider taking action the following day with the whole class by reteaching, modeling, or assigning a new or modified task. In our study, we found that in 92 percent of work samples in which all or almost all of the students missed the same question or questions, teachers left repetitive comments on the work. The teachers could have instead spent that time planning whole-class instruction targeted at the area of misunderstanding.

If you see patterns of errors in some students' work, on the following day meet with a small group of students who made the same mistake. Alternatively, it might make sense to place students in purposeful groups—in which at least one student made the mistake and one student did not—to facilitate peer learning. If one student's responses were very different from the rest of the class, you may want to plan some time to work individually with that student.

If there is a high degree of variability in the students' errors, it may be most beneficial to leave descriptive and prescriptive comments on their work. You can follow up with students later to make sure they have an opportunity to show what they've learned. For instance, if you give students the mixed numbers multiplication task mentioned above and find that a handful of students made a variety of errors, it may not be necessary to alter

instruction for these students. Rather, it might make more sense to provide individualized written feedback on the students' work that relates directly to the error they made. Later, you can ask students to complete a similar task to check their understanding.

With formal formative assessments, you can pause at essential points in an instructional unit, check in with all students about what they under-

The key is to create activities and ask questions that make students' thinking explicit.

stand and what they don't—and then make instructional adjustments and provide feedback. Make the most of your valuable time by investing in formal formative assessments that strike a balance between efficiency and effectiveness. [↗](#)

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# DATA-DRIVEN Shakespeare

**W**hen it comes to teaching English, Shakespearean sonnets reflect

both our deepest hopes and our greatest fears. We hope that these poems will give students rich opportunities to think critically and independently. But we fear that the challenging content will frustrate students who struggle with comprehension and critical reading. How can we set the bar high, but also help students clear it?

Imagine two different middle school teachers working to meet this challenge. Both of their classes are studying a complex text, Shakespeare's Sonnet 65. To develop their students' close reading skills, both teachers have asked students to pay special attention to the first quatrain of the sonnet,

*Since brass, nor stone, nor earth, nor boundless sea,  
But sad mortality o'er-sways their power,  
How with this rage shall beauty hold a plea,  
Whose action is no stronger than a flower?*

and its final two lines,

*O, none, unless this miracle have might,  
That in black ink my love may still shine bright.*

If you listen in on the students' discussion in both classrooms, you might think the lessons were equally rigorous

*Enhance literature  
classrooms by using writing  
to drive conversation.*

**Paul Bambrick-Santoyo**

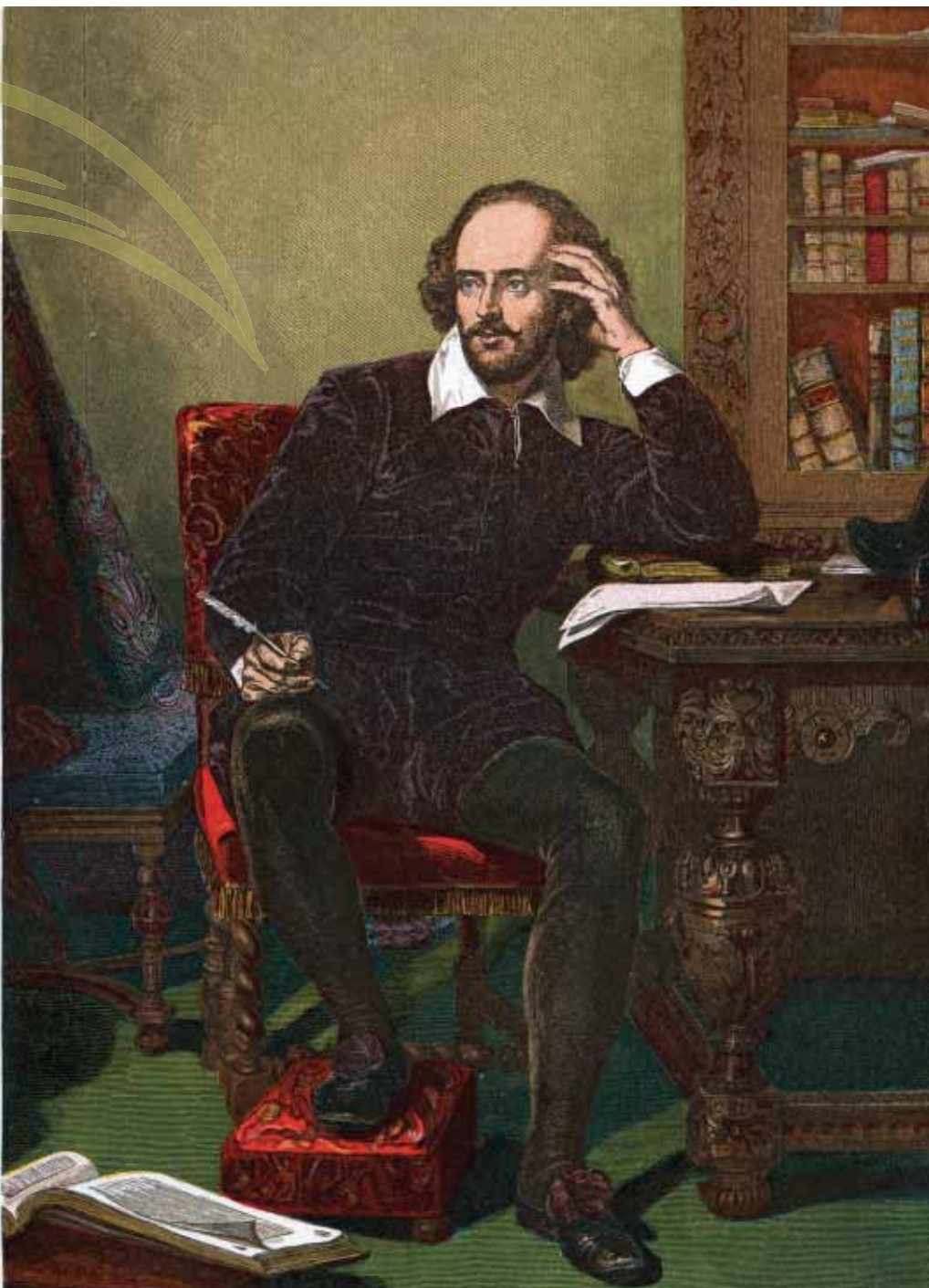
and invigorating. As each class discusses how Shakespeare's use of figurative language helps convey the theme of his sonnet, the students contrast the poet's association of beauty with a delicate "flower," and his use of "brass," "stone," "earth," and "boundless sea" to depict strength. Students also connect this language to the broader theme

of the poem—that art, and writing in particular, can give beauty a chance to survive time. A few students make insightful comments that draw the conversation to a powerful close. All in all, it's a rich, engaging conversation.

Yet if you later assess how well the students in each class analyze a different sonnet in writing, one class will significantly outperform the other. What will make the difference? The teacher of the higher-performing class—Hadley Roach, who teaches at North Star Academy in Newark, New Jersey—has transformed a great literature discussion into deeper learning by skillfully incorporating an under-utilized technique: She asks her students to write before they speak.

Integrating writing into the daily work of language arts instruction can be one of the most powerful tools for improving reading achievement, according to a recent study by Chandra L. Alston and Michelle T. Brown.<sup>1</sup> These researchers compared two groups of students—a group that made remarkable gains on standardized tests and another whose scores improved much less significantly—and considered what kinds of writing tasks the students in each





a student to initiate the conversation, Hadley asks every student to write an answer to the prompt, *What is the purpose of the imagery in these lines?*

Write first, talk second—it's a simple strategy, but one that's underused in literature classrooms. Students tend to formulate their ideas more thoughtfully and precisely in writing. And when they write first, *all* students get an opportunity to verbalize their thoughts—not only the most extroverted students, who might normally dominate the discussion.

**In a traditional class, as soon as students finish reading the poem, the class discussion begins.**

In traditional classrooms where discussion occurs first, by the time students are asked to write, they can generate an answer on the basis of what other students said rather than on their own comprehension. Thus, the final essay becomes an exercise in listening comprehension, not text analysis. Teachers can walk away with the false impression that their students have comprehended the material independently. In contrast, writing first gives a clearer picture of what students really understand so that the teacher can better respond to their true needs.

group had experienced. The results were dramatic. Students in the higher-achieving group were far more likely to have been assigned rigorous writing prompts in class and to have received feedback on their responses.

How can teachers make in-class writing a daily reality in their classrooms? Here are four simple instructional moves that Hadley Roach uses.

### **1. Write First, Talk Second**

Let's go back to the beginning of the class discussion. In a traditional class, as soon as students finish reading the poem, the class discussion begins with either student reactions or a well-formulated question by the teacher. But in Hadley's class, the first thing that happens, before any conversation takes place, is writing. Instead of calling on

### **2. Spar with an Exemplar**

Although the initial responses to the writing prompt are not graded, students will eventually be asked to write an analysis that shows what they have learned. Most of us who teach literacy have grappled with the difficulty of grading student essays objectively. When you have 30 papers before you, how do you decide what constitutes a high-level response versus a mid-level or low-level response? A rubric

is a helpful starting point, but applying a numbered list of criteria to a fully fleshed-out essay is still a challenge. What does a good answer really look like for this particular prompt?

The solution: When you create your final writing prompt, write not only the question students are to answer, but also an exemplar response for your own information. For example, here's an exemplar Hadley could use to set the bar for her students to respond to her pre-discussion writing prompt about Sonnet 65:

Sonnet 65 and also compares notes with other educators teaching the poem. In this way, she gets a clear sense of what a deep understanding of Sonnet 65 would look like, even for someone who has interpreted it differently than she has.

This sparring greatly enhances Hadley's own understanding of the poem and prepares her to manage students' multiple interpretations. It can also unearth common areas of focus (for example, she notices that all the critics focus on the words "shines bright" in

to get something down on paper. Then she moves on to students who write more slowly, thus giving them some extra time to formulate the beginning to their own answers so that she can respond meaningfully.

*Use symbols to give feedback.* The second obstacle to giving efficient feedback is the amount of time it takes to interact with each student. Hadley plans a few specific symbols she can routinely use to give feedback on students' writing. Here are some of the symbols she uses as she circulates:

## Feedback is one of the most important drivers to improve critical reading and writing. So **why limit feedback to summative essays** at the end of a unit?



Shakespeare engineers a contrast between beauty and time in his first quatrain. He offers up the concrete images of "brass," "stone," and "boundless sea" only to remind the reader that they will be destroyed by time despite their apparent strength. When he compares beauty to a "flower" in line 4, that flower seems so weak in comparison to the metal, rock, and sea used to represent time's strength that beauty's doom at time's hands seems a foregone conclusion. The imagery in these lines shows how hopeless the narrator believes beauty's fate looks at the beginning of the poem.

Why spend the time writing an exemplar when students will complete their own analyses and we don't want to steer them to only one correct answer? Because you really can't do justice to their analyses without thinking through the desired response in advance. In fact, many excellent teachers do more than just write their own exemplar—they "spar" with other exemplars. In preparing her writing prompt, Hadley reads up on the most important critics who have analyzed

the sonnet's final lines). In the process, Hadley has become a better student of Shakespeare herself, which makes her a better teacher.

### **3. Give In-Class Feedback on Students' Writing**

Feedback is one of the most important drivers to improve critical reading and writing. So why limit feedback to summative essays at the end of a unit? Hadley gives students feedback on their writing every day. Here are three key actions that help her find the time.

*Create a monitoring pathway.* Most teachers who circulate the classroom to give feedback gravitate toward the students who usually struggle or those who raise their hands for help. The cost of this approach is that few other students receive support. To prevent this problem, Hadley monitors students' writing in a pre-set, strategic order, which she calls her *monitoring pathway*. Perhaps counterintuitively, she goes to her fastest writers first because they're typically the first ones

■ **M=meaning.** The student's basic understanding of the text is off. He or she needs to re-read.

■ **A=argument.** The student's main argument is off.

■ **E=evidence.** The student needs more or better evidence.

■ **Z=zoom in and then zoom out.** The student needs to zoom in on each piece of evidence, unpacking words and phrases, and zoom out to explain how this evidence achieves the author's purpose.

Rather than spend 20 seconds explaining that a student needs to look for better evidence, Hadley gives that feedback with a simple code written in the student's page. Twenty seconds shaved off each student interaction translates to reaching more students in a 10-minute span. More students have a chance to improve their answers even before the class discussion begins. Hadley's ability to deliver coded feedback quickly is also greatly enhanced because she already has an exemplar response in hand. Because



she knows what she's looking for, it is easier for her to identify the gaps.

*Identify the patterns.* By using a monitoring pathway and coded feedback, Hadley can more easily identify the patterns of errors that are occurring. On her way through the classroom, she makes notes about overall trends in student understanding, writing the same simple coding on her own paper that she uses for her students. For example, she notices that “E” (lack of high-quality evidence to support an argument) is a weakness in more than half of the students’ written responses. During the following discussion, she draws students’ attention back to the text and encourages them to cite evidence for the ideas they articulate.

#### 4. Drive the Discourse to What Students Need

By including pre-writing in the lesson, Hadley identifies areas of confusion even before the conversation begins. She can now drive the conversation to what students need to learn, not what they already know.

After students write about Sonnet 65, Hadley calls her class back together. “Students,” she says, “we have some solid analyses of the poem, but we’re missing some key evidence. I want us to look back at certain lines.” She follows by asking targeted questions to clarify the meaning and significance of key words that students misinterpreted or overlooked. “What does ‘o’er-sways’ mean?” she asks. After a student infers that it means something like “to overtake,” Hadley follows with, “So what does it mean that mortality overtakes their power?” At that point students grasp the concept of these seemingly strong and permanent things (brass, stone, earth) being defeated. With that concept solidified, she turns to the last line: “You all noticed that ‘black ink’



refers to Shakespeare’s own writing. But why use the phrase ‘shine bright?’ What analogy is he making?” Slowly but surely, the students unpack the big idea that a star is heavenly in a way that brass, stone, and sea are of the earth.

As the discussion builds from word meaning to thematic interpretation, Hadley then spurs conversation further by having students analyze one of their peers’ responses. “Let’s look at Lia’s answer,” she says, showing the writing

**Write first, talk second**—it’s a simple strategy, but one that’s underused in literature classrooms.





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When we use student writing to inform literary discussion, we can meet our students exactly where they are at every minute of every class.



sample on the projector. “Do you agree or disagree with her argument? Darius?” Hadley already knows that Darius gave a different answer in his written response. Healthy debate has begun.

Her familiarity with the students’ written responses enables Hadley to use the following strategies during the conversation:

■ *Start from the point of error.* Hadley doesn’t waste class discussion time on the analyses that students have already done adequately in writing; instead, she uses that time to dive into their errors. This is data-driven discussion at its best: students use discourse to challenge one another to improve their thinking.

■ *Show-call.* By showing examples of student responses and asking the class to react to those answers, Hadley makes it the students’ job to unpack misunderstandings so that they build off one another to get to a deeper understanding. She can also leverage strong responses to push the class forward.

■ *Prompt strategically.* Hadley doesn’t stop there, though. Rather than just making sure that students are the ones leading the discussion, she monitors *which* students are doing the talking and when. She asks questions of students she knows are struggling with particular challenges, not students who already know the answers. The conversation is dominated by the

students, but it now responds to *all* students’ needs, not just the needs of the extroverted few.

### A Data-Driven Cycle of Improvement

Think about the benefits of putting writing first. Although discussion without pre-writing often produces a rich conversation, discussion *with* pre-writing is more likely to produce meaningful, rigorous learning, in which 100 percent of students grapple with the text and improve their ability to read deeply.

Implement these steps in your classroom, and you’ve adapted traditional discussion-based learning in a way that will enhance every student’s literary understanding. You’ve increased what each student can do individually, but you’ve also increased what students can do as a team. The end result is a powerful, data-driven cycle of improvement for literacy: read, write, revise, discuss, revise, and read even more.

When we use student writing to inform literary discussion, we can meet our students exactly where they are at every minute of every class. When we know how far they’ve already come, we have a great opportunity to help them go even further. **EL**

<sup>1</sup>Alston, C. L., & Brown, M. T. (2015). Differences in intellectual challenge of writing tasks among higher and lower value-added English language arts teachers. *Teachers College Record*, 117(5), 1–24.

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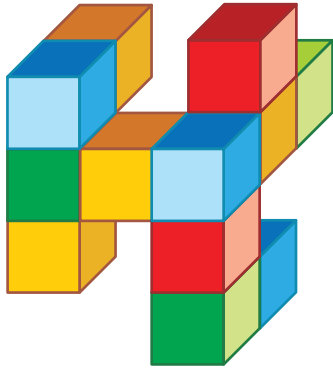
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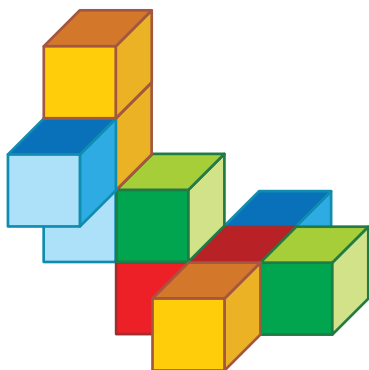
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*An informed understanding of learning progressions can lead to more productive discussions about student work.*

**Jennifer L. Kobrin  
and Nicole Panorkou**

**S**tudent work is the currency of the classroom. Every day, students in classes around the world produce massive amounts of work in the form of written assignments, projects, worksheets, and other products. But how can educators unlock the power of this rich source of data? How can we move the purpose of student work from proving mastery to improving learning? (Deuel, Nelson, Slavit, & Kennedy, 2009). Consider the following scenario of a traditional approach to looking at student work.



# The Building Blocks of Learning

A team of 3rd grade teachers discusses student work produced during a math lesson about measuring area. In the activity, students were asked to compare the area of two rectangular robot heads and decide which one covered more area. The teachers talk about one student's response (see fig. 1). This student used a ruler to measure the height of the two heads and said, "The first one is two inches, and the second one is three inches, so the second one is bigger."

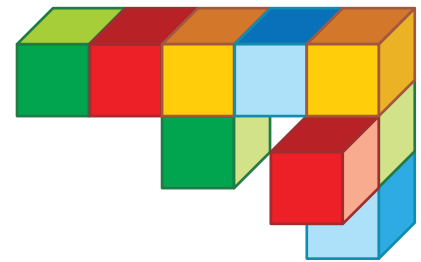
Jane facilitates the discussion about the student's work with three other teachers.

JANE: What do you notice about this student's work?

ALICE: The student only measured the heights of the two heads.

ROBERT: I noticed that the student knows how to use a ruler correctly, but he doesn't seem to understand the concept of area.

ROSA: It was interesting that the student said the second head was "bigger" and didn't use the word "area."



JANE: What do you think this student was thinking about?

ROBERT: The student doesn't seem to understand that to compute area, you need to measure both the length and width of the shape and then multiply.

ROSA: This student might not even know what "area" means.

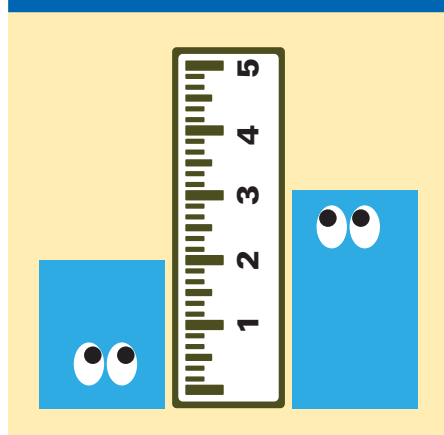
JANE: What would you do next in your instruction?

ALICE: I would review the concept of area and emphasize that it is the amount of space inside of the shape. Comparing only the heights of the two shapes doesn't give you a comparison of the area.

This dialogue is consistent with the kinds of responses offered in formative



**FIGURE 1. Robot Head Area Task**



assessment protocols. Although the teachers use the student's work to broadly identify what he knows and what feedback they can provide, this discussion is still hovering above the precise analysis needed to guide productive decisions about teaching and learning.

### **Incremental Learning**

Learning progressions are a valuable tool that teachers can use to go beyond the traditional approach and unlock the potential of student work. Also referred to as “learning trajectories” in mathematics, learning progressions are described as “a carefully sequenced set of building blocks that students must master en route to mastering a more distant curricular aim. These building blocks consist of subskills and bodies of enabling knowledge” (Popham, 2007, p. 83).

A key idea behind learning progressions is that they are informed by research on how students learn and how students' thinking develops and becomes more sophisticated over time as a result of instruction. Learning progressions are distinct from educational standards; progressions describe the typical ways students think about a topic, whereas standards are aspi-

rationally based on expert consensus about what students should know and be able to do. Another common feature of learning progressions is that they describe the stages or levels students move through as their understanding develops, the kinds of tasks that students can perform at each level, and what that performance looks like (Heritage, 2013).

Learning progressions are ideal for interpreting student work. Although existing protocols on looking at student work engage teachers in reflection about what the work reveals about students' thinking, learning progressions can help teachers identify student work that illustrates different levels of developing expertise. In doing so, teachers can place student work along that continuum.

In 2014–2015, we worked with 22 3rd grade teachers in the United States and Australia as part of a research study to evaluate the insights that a learning progression provides about students. Specifically, we examined how familiarity with a learning progression increased teachers' ability to find evidence of students' level of thinking, and whether that knowledge helped teachers plan more targeted and personalized instruction.

The teachers participated in professional development (PD) that introduced them to a learning progression about area measurement and engaged them in several activities designed to interpret student work using the progression. Six teachers participated in 20 hours of face-to-face PD at their school, and the remaining 16 participated in online PD modules. Our results were quite promising. We found that the learning progression not only served as a useful framework for examining student work, but it also increased teachers' content and pedagogical knowledge for teaching

area measurement. Here, we share an example from our project to illustrate how the learning progression can help teachers interpret student work.

### **Measures of Student Understanding**

Geometric measurement of area is usually defined as covering or filling space and then quantifying that covering. As students develop area measurement skills over time, they

**We found that the learning progression not only served as a useful framework for examining student work, but it also increased teachers' content and pedagogical knowledge for teaching area measurement.**

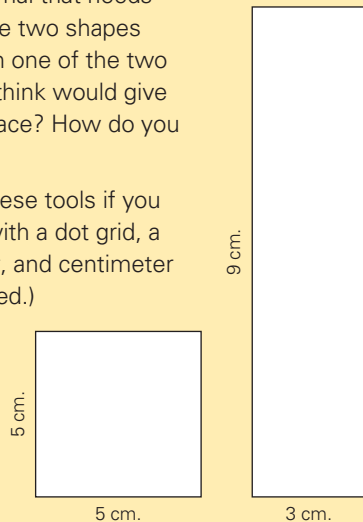
typically display several misconceptions. For example, when students work on tasks that require them to cover space to measure area, they often leave gaps between units, overlap them, double count them, or combine units of different size (Clements, Sarama, & Battista, 1998; Lehrer, 2003). Moreover, it is often difficult to advance students from the strategy of counting or adding individual tiles in a figure to the more sophisticated strategy of using the row-and-column structure of a shape to compute area. The latter strategy leads to a conceptual understanding of the area

**FIGURE 2. Hippopotamus Area Task**

The animal expert says: We need to design a new yard for the hippopotamus. This is a very large animal that needs a lot of space. We have two shapes to choose from. Which one of the two shapes below do you think would give the hippo the most space? How do you know?

You may use any of these tools if you like. (A transparency with a dot grid, a pair of scissors, a ruler, and centimeter square tiles are provided.)

(Note: the dimensions of the shapes are shown, but were not presented to students.)



**FIGURE 3. Thomas's Response**

Thomas traces the square and rectangle on grid paper and says, "I'm gonna count which ones take up more space." He counts each square on the grid that is covered by the square as shown here and says, "There are 25 spaces." He does the same thing for the rectangle and says, "This one takes up 27 spaces."

1	6	11	16	21					
2	7	12	17	22					
3	8	13	18	23					
4	9	14	19	24					
5	10	15	20	25					

formula, length times width (Baturu & Nason, 1996). The teacher plays an important role in helping students resolve these misconceptions—and eventually develop a full conceptual understanding of the area formula.

Figure 2 shows a task for measuring the area of a hippopotamus's living space. Students can use a variety of strategies to find the area, which, in turn, reveal the sophis-

tication of their reasoning. The teachers in our study were asked to examine Thomas's response (see fig. 3), describe the student's thinking and misconceptions, and suggest an instructional activity.

Before participating in the professional development, teachers' descriptions and ideas for instructional responses tended to be vague. For instance, when asked to describe what Thomas knows and understands, the teachers described his strategy ("Thomas understands area by placing the shapes on the grid and counting the squares") rather than his underlying thinking. They provided very general instructional strategies, such as reviewing or reteaching the area formula.

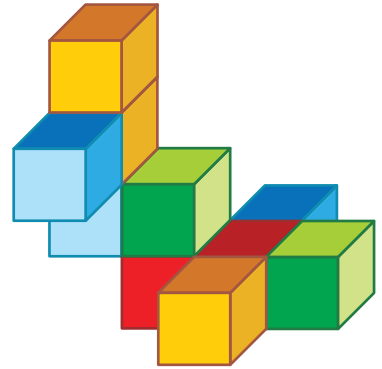
In contrast, the learning progression for measuring area specifically describes the process of student thinking and provides sample work at each level. Figure 4 presents some of the relevant stages of the learning progression we constructed. For students to acquire a full conceptual understanding of the area formula, they pass through a series of intermediate stages—each stage building on the previous one and preparing students for the next.

Using the learning progression as a framework, a teacher can see that Thomas's work provides evidence that his current thinking is consistent with the stage called "using area units to measure area." The next stage in students' learning of area measurement is "using area composites to measure area." At this next stage, students understand that a shape is made up of rows and columns and that a more efficient way to measure area involves use of the composites.

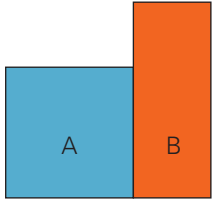
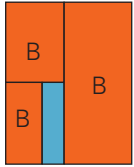
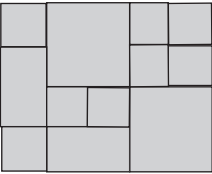
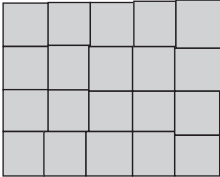
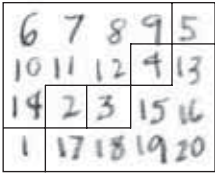
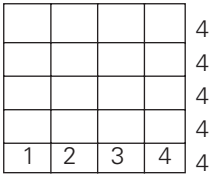
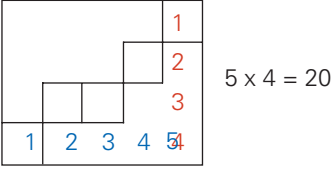

After completing the PD, the teachers in our study could interpret student thinking by referring to the intermediate stages of the learning progression. They were better able to help students like Thomas move from seeing area as a collection of individual units to understanding area as a collection of row and column composites. With those more sophisticated stages in mind, teachers gave specific instructional suggestions, such as working on composition and decomposition of shapes or giving students fewer blocks to measure area, to bridge the gap between the two stages and help students reach the next level.

**A Look Back at the First Task**

Looking back at the initial task of measuring the area of robot heads, if the teachers became familiar with the



**FIGURE 4. Excerpt of Learning Progression for Area Measurement**

Name of Stage	Description of Stage	Example of Student Behavior
Perceptual coordination of attributes across figures	Student compares the areas of two shapes by direct comparison, without quantifying the numbers, either by placing side-by-side or superimposing one on top of the area.	<p>“Shape B is bigger because it’s taller.”</p> 
Informal understanding of conservation of area	Student understands that the total area of a shape does not change if you turn or rotate it, or cut it into smaller pieces and rearrange it.	<p>Student cuts Shape B in pieces and places them on top of Shape A to compare.</p> 
Using equal area units	In measuring area, student considers the size of the units.	<p>A common misconception is that the student may use different size square tiles to cover and measure the shape.</p> 
Using area unit iteration	Student can fill in shapes with unit squares to measure area, without leaving gaps or overlapping the units.	
Using area units to measure area	Student counts each individual unit square within a shape to measure its area.	
Using area composites to measure area	Student counts the number of units in a row or column and then repeatedly adds that number to compute area.	<p>4 units in a row, and there are 5 rows in the rectangle, so <math>4+4+4+4+4 = 20</math> square units is the area.</p> 
Using multilevel area composites to measure area	Student counts the number of units in a row, then counts the number of units in a column, and then multiplies the two in order to compute area.	
Adopting formal formula for area	Student applies the formal area formula (length x width) appropriately and with minimal prompts or cues.	<p>5 cm.  5 cm. x 7 cm. = 35 sq. cm</p> <p style="text-align: center;">7 cm.</p>

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learning progression, their discussion of student work could be much more focused and informed, resulting in more concrete and targeted instructional suggestions.

JANE: What do you notice about this student's work?

ALICE: The student only measured the heights of the two heads.

ROBERT: The student knows how to use a ruler correctly, but he doesn't seem to understand that he needs to measure both height and width to compare area.

JANE: What do you think this student was thinking about?

ROBERT: The student seems to only consider height as a way to measure area. Isn't this a common misconception in the learning progression stage of "perceptual coordination of attributes across figures"?

ROSA: Well, we are not sure about that. In the task, the two heads look as if they have the same width. Maybe the student noticed this, and that's why he measured only the height.

ROBERT: True. We need to examine this student's thinking further with additional tasks.

JANE: What do you think you might do next in your instruction?

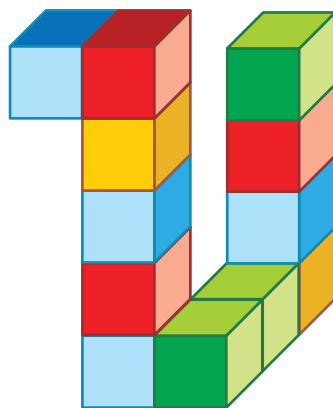
ROSA: I would give the student two shapes that have very different lengths and widths to determine whether he recognizes the two dimensions.

ALICE: I would try to rotate the shapes and ask him to measure again.

ROBERT: We could also ask him to cut the shapes and try to "fit" one into the other. That will help him to master the idea of "conservation of area."

### Learner-Centered Practices


Our research shows that a learning progression can support teachers



Because the progressions are based on observations and insights from decades of research on students, learning progressions are naturally learner-centered.

as they take a more fruitful look at student work and that they can use the insights gleaned as part of their ongoing formative assessment. In our project, teachers worked as a team to make meaning of the learning progression and to apply it to their daily practice. This approach is consistent with the idea of collaborative inquiry, which is critical for transforming teaching and improving student learning (Langer & Colton, 2005). And because the progressions are based on observations and insights from decades of research on students, learning progressions are naturally learner-centered. They take a developmental view to help teachers focus on individual students' learning over time and how they can assist that development.

Yet, despite recent attention to learning progressions as a potential tool to reform assessment and

instruction, efforts to support teachers' use of these progressions are not prevalent. The barriers to widespread adoption include a lack of district resources to provide sustained professional development and misalignment of learning progressions with existing curriculum, assessments, and instructional materials. Close work with teachers as they are introduced to learning progressions and integrate them into practice is essential to fulfill their promise for helping teachers and ultimately students. 

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# PRE-ASSESSMENT

## Promises and Cautions

*To ensure that pre-assessment is worth the time and effort, keep these principles in mind.*

**Thomas R. Guskey and Jay McTighe**

**T**his article began with a conversation between two friends who had different perspectives on the use of pre-assessments. One of us reasoned, “Pre-assessment makes sense! Effective instruction should begin with a clear understanding of what students bring to the learning experience.” The other asked, “But where’s the evidence? There’s scant research showing that pre-assessment has any significant effect on teachers’ instructional planning or student learning outcomes.”





Despite our differences, we agreed that the likelihood of pre-assessment yielding positive results depends on how effectively it is applied. So we set out to clarify the foundation of effective pre-assessment for ourselves and for others.

### What We Know

Pre-assessments are the instruments or methods teachers use to determine students' knowledge, skills, or dispositions before instruction. Theoretically, pre-assessments help teachers determine where to begin instruction and provide teachers with baseline data from which to plot students' learning progress.

Some pre-assessments are broad, addressing grade-level or course learning goals, and are administered at the beginning of an academic year or semester. Others are narrower in scope and are administered at the start of a specific unit, focusing on that unit's learning targets. Some advocates even recommend using pre-assessments at the beginning of every lesson.

Nearly every modern instructional planning model, differentiation approach, and personalized learning system incorporates some form of pre-assessment. The designers of these systems clearly believe that it's essential to tap students' prior knowledge, experience, skill levels, and potential misconceptions to target instruction to individual students' learning needs. In theory, pre-assessments also may spark students' interest and provide a metacognitive foundation for self-monitoring and self-regulation by helping students connect new learning with already-acquired knowledge and understanding (Tomlinson & Moon, 2013).

Despite widespread advocacy, however, research evidence supporting the use of pre-assessments is hard to find (Cilliers, et al., 2012). The evidence that does exist comes mostly from college or university classrooms and focuses primarily on the use of pre-assessments as pre-tests from which improvements or gains in student learning can be calculated (Lazarowitz & Lieb, 2006; Wagner, Sasser, & DiBiase, 2002). We could find little research showing that successful teachers consistently use pre-assessment data in planning instruction or that the use of such data leads to improved student learning.

### The Promises of Pre-Assessment

How, then, can teachers make sure that they're using pre-assessments in ways that make them worth the time they take? The answer: by keeping in mind the purposes and potential benefits that have been identified in the literature (Hockett & Doubet, 2014). Here are some of the most frequently mentioned potential benefits.

#### 1. Determining Students' Prior Knowledge and Skills

Cognitive psychology underscores the importance of prior knowledge in learning. As Bransford, Brown, and Cocking (2001) state,

The contemporary view of learning is that people construct new knowledge and understandings based on what they already know and believe. . . . A logical extension of the view that new knowledge must be constructed from existing knowledge is that teachers need to pay attention to the incomplete understandings, the false beliefs, and the naive renditions of concepts that learners bring with them to a given subject. (p. 10)

**Research evidence supporting the use of pre-assessments is hard to find.**

In other words, if new learning is built on a base of previous knowledge, it stands to reason that teachers should find out what students know, or think they know, about new topics or concepts. In this sense, pre-assessments are akin to the physical examination and diagnostic tests physicians use before prescribing an appropriate medical regimen.

Some pre-assessments measure prerequisite knowledge and skills; that is, what students *must* know and be able to do to succeed in mastering upcoming learning targets. On the unit level, a review of the required knowledge and skills (ideally focusing on specific gaps identified through pre-assessment) can be part of the unit introduction and typically requires only 15 or 20 minutes of class time. On the course level, an introductory unit might be planned to directly teach students these prerequisite skills. A classic study (Leyton, 1983)

showed that high school teachers who began second-level mathematics and foreign language classes with a brief review of common learning difficulties and gaps in understanding identified on a course pre-assessment more than tripled the number of students who achieved mastery on course final examinations. This class review, coupled with individualized help for students who had specific difficulties, lasted just a week and a half but yielded impressive results.

## 2. Monitoring Student Progress

Assessing students' entry-level knowledge and skills at the start of a new unit or course also provides baseline data from which teachers can gauge improvements in learning. More formally, pre-assessment results may be used to calculate gain scores in value-added models of accountability or to monitor progress for instructional interventions (Jung, 2015). Teacher evaluation processes that include assessments of student learning objectives typically employ this type of pre- and post-test protocol. We should note, however, that this process can be corrupted, especially in high-stakes accountability contexts where gain scores are used for evaluation purposes. For example, teachers can achieve impressive gains simply by encouraging students to perform poorly on the pre-assessment.

## 3. Communicating Expectations

Pre-assessments may serve as signals to students of what they're about to learn. Carefully constructed pre-assessments also may be used as advance organizers (Ausubel, 1978) to activate prior knowledge, preview the content, and guide students' thinking about it. The technique of visualization in teaching specific behaviors or physical skills, for example, shows students

Rather than communicating to students, "Here is what you don't know and cannot do," **the pre-assessment should emphasize "Here are the exciting things you're going to learn."**

models of excellent performance prior to instruction and then encourages students to mentally picture performing the skill with similar competence (Mahoney, Gabriel, & Perkins, 1987). Students can then self-assess their current skill and performance levels against models of excellence in order to set learning goals and monitor their progress along the way. Similarly, teachers sometimes provide students with examples of excellent writing and help students identify the elements that make the example so excellent before having students develop their own compositions. Often students set personal writing goals based on the models.

## 4. Focusing Students' Attention on Learning Targets

As they approach a new unit or course, students should focus on what they're going to learn rather than on the particular activities or assignments in which they will engage. In other words, we want students to think about how they will be different after doing this project, reading this book, or conducting this investigation.

A social studies teacher, for example, may ask students to respond to two essential questions at the start of a new unit on the Revolutionary War: (1) Why do people revolt? and (2) Is war ever justified? These questions prompt students' thinking and open the door to an exploration of the big ideas of the unit. At the end of the unit, students' response to these ques-

tions should demonstrate growth and deeper understanding.

## 5. Checking for Misconceptions

Misconceptions reflect preconceived notions or misunderstandings. Children construct mental models of the world on the basis of their experiences, and sometimes, especially in science, their conceptions are flawed (see Wandersee, Mintzes, & Novak, 1994). Teachers can identify these misconceptions with pre-assessments and then target them directly in their instruction.

The American Association for the Advancement of Science (AAAS) publishes a comprehensive database of commonly held misconceptions about topics in science, brief pre-assessments that allow teachers to ferret out these misconceptions (see <http://assessment.aaas.org/topics>). Here's an example of a multiple-choice item designed to assess the common misconception that all cells have the same size and shape:

What is TRUE about the size and shape of cells?

- All cells are the same size and shape.
- All cells are the same size, but not all cells are the same shape.
- All cells are the same shape, but not all cells are the same size.
- Different cells can have both different sizes and different shapes.

The AAAS database reports that 41 percent of middle and high school students answered this item incorrectly.

Such information can help a teacher confront this misconception during instruction.

### 6. *Identifying Students' Interests, Talents, and Preferred Ways of Learning*

At the beginning of the school year or a new course, a pre-assessment may help teachers find out about their students more personally. For example, teachers may have students write a brief letter describing themselves as learners, responding to such prompts as:

- What subjects or aspects of a particular subject do you enjoy most? Why?
- What subjects or aspects of a particular subject do you enjoy least or find most difficult? Why?
- What are your hobbies, interests, and talents?
- How do you learn best? What do you want your teachers to know that will help them help you learn best?

This kind of pre-assessment data can give teachers ideas about how to connect their students to the content. If the pre-assessment is in a written format, it can also provide information about students' writing skills. More important, a pre-assessment like this can communicate to students that their teacher cares about them and wants to get to know them.

### **Some Cautions**

Despite their reasonableness, pre-assessments can have significant drawbacks that teachers need to consider. Here are some of the most frequently noted problems, along with suggestions for averting them.

#### 1. *Beginning on a Bad Note*

Vernon Law, a famous baseball major league pitcher, once said, "Experience is the worst teacher; it gives you the test before presenting the lesson." The same can be said of pre-assessments. If pre-assessments simply demonstrate to students how little they know, this exercise may negatively

## Guidelines for Effective Pre-Assessment

The following recommendations can help ensure that pre-assessments remain practical, provide useful data, and enhance student learning.

### 1. Clarify the purpose(s) for pre-assessment.

Carefully consider why you are pre-assessing, what information you are intending to uncover, and what methods you will use to gather that information. Always explain the purpose of the pre-assessment to students. Emphasize that the information from the pre-assessment is intended to help you better understand how to address students' needs, connect to their interests, and excite them about the forthcoming topics. Assure students that the results of these assessments will not be used for grading purposes.

### 2. Determine how you will use the information.

Pre-assessment without associated action is like eating without digestion. Use the results of pre-assessments to adapt your teaching to enhance student learning. Your possible adaptations include reviewing essential knowledge and skills students may be lacking, addressing misconceptions students may harbor, providing specifically targeted instruction to the class, linking the content to students' interests if appropriate, and differentiating instruction for individuals or groups when needed.

### 3. Use pre-assessments judiciously and efficiently.

Pre-assessments are not necessary for every new instructional unit. Use them only when they provide information you don't already have or cannot anticipate and when they prompt student interest or thinking about the topic to be learned. When you do employ pre-assessments, use easy-to-give and easy-to-check formats (for example, true/false, multiple-choice, KWL) that yield quick, useful information to guide instruction. We generally do not recommend the use of pre-assessments in advance of individual lessons.



affect their disposition toward the upcoming content.

To avoid this potential negative reaction, teachers should explain that the pre-assessment's purpose is to help the teacher optimize instruction, highlight learning targets, and help students set learning goals. They also need to assure students that the results will not count against them. Rather than communicating to students, "Here is what you don't know and

short-answer items can efficiently reveal students' knowledge and skill gaps.

Experienced teachers who know their subject matter and their students well often design instructional materials that anticipate and address common student misunderstandings, thus making pre-assessments unnecessary. Therefore, we caution against requiring *all* teachers to use the same canned pre-assessments.

## Pre-assessments are akin to the physical examination and diagnostic tests physicians use to prescribe an appropriate medical regimen.

cannot do," the pre-assessment should emphasize "Here are the exciting things you're going to learn."

### 2. Wasting Instructional Time

Because pre-assessments typically address concepts and skills students haven't yet been taught, the results often don't surprise teachers. Especially when the curriculum is well organized and includes identified learning progressions, experienced teachers typically can accurately predict the results of pre-assessments. So if they provide no new information and only confirm what the teacher already knows, pre-assessments can steal valuable instructional time.

To avoid this potential drawback, teachers should employ pre-assessments only when the results cannot be predicted and when the exercise offers clear benefits to students. Further, pre-assessments should be brief and take as little time as possible. When suitable to the learning targets of the unit, true/false, multiple-choice, or

### 3. Creating Management Challenges for Teachers

The data from pre-assessments can present significant instructional challenges when the results reveal students at multiple knowledge and skill levels. A pre-assessment might show that (1) some students are well informed and can demonstrate their mastery of all the unit learning targets before instruction begins; (2) some are partially informed and have mastered some but not all of the learning targets; (3) some are uninformed and have no mastery of any of the learning targets; and (4) some are misinformed and have misconceptions regarding the learning targets. Preparing four different instructional plans to address the variation would not only challenge the most imaginative teachers, but also create significant classroom management problems.

The key to addressing this challenge rests in finding an efficient and effective compromise between completely individualized instruction and

one-size-fits-all teaching. In planning lessons, teachers should include a variety of instructional strategies that tap the wide range of student interests and skill levels, and engage students in multiple types of learning activities. They might consider giving the class an assignment while offering a mini-lesson for a small group; having two or more teachers work with small groups to address specific needs; or enlisting the assistance of an instructional aide or resource teacher. With guidance, students may even be able to self-select the activities that help them learn best. Another option might be to begin with a really engaging instructional activity that involves all students, move quickly through a learning experience focused on an essential understanding, administer an authentic formative assessment, and then differentiate additional instruction on the basis of the results.

### 4. Taking Too Much Time to Analyze

To make pre-assessment data useful for instructional purposes, teachers must gather and analyze the pre-assessment data quickly—before the introduction of the new unit. So teachers must use assessment formats that allow for rapid scoring and tallying of results, especially at the secondary level, where teachers typically see a large number of students daily.

One strategy for gathering these data and activating background knowledge before instruction is to have students develop a KWL chart (Ogle, 1986). The chart consists of three columns: *K* for what students already know about the topic or can already do, *W* for what they want to learn or be able to do, and *L* for what they learned from the unit. These charts can be used in any subject area to gather information from students quickly and efficiently.

Another efficient technique is to

use white boards or pupil-response systems with which students respond to prompts, typically in true/false or multiple-choice formats, to provide the teacher with a quick check of their prior knowledge.

### Proceed with Caution

Our exploration of pre-assessments justifies both prudent skepticism and cautious optimism. We caution educators not to simply embrace a practice that seems to “make sense” without critically examining its purported benefits and possible drawbacks. The usefulness of pre-assessments depends on their purpose, form, and utility. They can guide teachers to more effective instruction, but they also can be a waste of valuable instructional time. Successful implementation requires teachers to take advantage of the potential benefits while avoiding the potential drawbacks, keeping in mind the central purpose of helping all students learn well. ■

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EXAMINING CURRENT ASSESSMENT PRACTICES

# STANDARDIZED TESTS

## Purpose Is the Point

*The time is ripe for a shift to more purposeful educational assessment.*

**W. James Popham**

**S**tudents in the United States are being educated less well these days than they should be. A key cause for this calamity is that we often use the wrong tests to make our most important educational decisions. What's so sad about this state of affairs is that few people—even educators—actually understand how today's off-target educational tests con-





tribute to diminished educational quality.

When future educational historians look back at the last few decades of U.S. public schooling, they will surely identify a system in which students' scores on annual accountability tests became, almost relentlessly, the prominent determiner of a school's success. But what if the tests currently being used to evaluate our schools are inappropriate? That would mean that many less-skilled teachers whose students score well on those tests aren't receiving the professional support they desperately need. Even worse, because the students of strong teachers might earn low scores on such tests, many of those fine teachers are being urged to abandon effective instructional techniques that appear to be flopping. The net effect is that massive numbers of students might be receiving a lower quality of education than they should.

The moment has come for us to reconsider how we test students in the United States. The time is ripe; here's why.

### **A Matter of Timing**

In real estate, it's often said that the chief determiner of a property's worth is "location, location, location." Similarly, the key condition for wholesale changes in educational testing is "timing, timing, timing." Two recent events, both profoundly important, suggest that if an effort to meaningfully modify the nature of U.S. educational testing were ever to succeed, *now* is the time to undertake such a shift.

### **The Consortia-Built Tests**

In September 2010, then-U.S. Secretary of Education Arne Duncan announced the awarding of major contracts to two consortia of U.S. states that had agreed to develop "next-generation" educational tests suitable for assessing students' mastery of the skills and knowledge set forth in the Common Core State Standards (CCSS), a set of curricular aims that almost all 50 states had adopted. At a cost of more than \$350 million, these consortia-built tests were supposed to permit state-to-state, national comparisons regarding students' mastery of the CCSS curricular targets. Students' scores were to provide estimates of students' college and career readiness. Moreover, one of the two consortia contended that its tests would also serve as catalysts for increased student learning.

Now that both consortia have administered their

tests and released examples of their test items, it's clear that no meaningful national comparisons will be possible. Not only are the reporting systems of the two consortia incompatible, but also a good many states have either dropped out of their chosen consortium or adopted alternative state curricular aims.

Nor does it seem that the consortia's tests will stimulate substantial instructional improvements. Many U.S. educators have concluded that the tests' score-reporting systems appear too broad to be of substantial instructional use to in-the-trenches teachers.

**We often use the wrong tests  
to make our most important  
educational decisions.**

### **Publication of the Joint Standards**

A second significant event was the July 2014 publication of the most recent revision of the *Standards for Educational and Psychological Testing* (2014).<sup>1</sup> These standards represent a set of well-vetted admonitions from the three national organizations most concerned with U.S. educational testing: the American Educational Research Association, the American Psychological Association, and the National Council on Measurement in Education. These standards (frequently referred to as the *joint standards* because of the three organizations that collaboratively sponsor their development) are likely to have a major impact on U.S. educational testing because they play a prominent role in courtroom litigation involving educational tests.

Such cases often involve the use of accountability test scores to deny what the plaintiffs believe are constitutionally guaranteed rights. Given the current use of test scores to evaluate teacher quality, we are apt to get a flock of new cases involving firing and tenure decisions about teachers based, at least in part, on students' scores on achievement tests. The new joint standards will shake up that cage for sure.

For many years, and in several previous editions of the *Standards* document, assessment validity

has been seen as the accuracy with which a test-based *inference* (or, if you prefer, a test-based *interpretation*) depicts a test taker's covert capabilities, such as his or her mastery of a cognitive skill or body of knowledge. Indeed, assessment validity has generally been conceded to be the most important concept in all of educational measurement. Yet for a number of years, increasingly large numbers of measurement specialists have also clamored for tests to be judged not only by the inference-accuracy stemming from test scores, (such as the degree to which a student has mastered a set of state curricular goals)



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but also according to the *consequences* stemming from those inferences, (such as whether a low-scoring student should be denied a high school diploma). Happily, the architects of the 2014 joint standards coupled the consequences of test usage with the need to arrive at accurate test-based interpretations regarding what a test taker's score means.

To illustrate, let's consider how the new joint *Standards* document introduces its chapter on validity:

Validity refers to the degree to which evidence and theory support the interpretations of test scores for proposed uses of tests. Validity is, therefore, the

most fundamental consideration in developing tests and evaluating tests. (p. 11)

The game-changing phrase in this description of validity is “*interpretations of test scores for proposed uses.*” By blending the *proposed use* of a test with the need to arrive at accurate interpretations about a test taker's performance, the writers of the 2014 standards adroitly resolved how to infuse test usage into the quest for accurate score-based interpretations.

To underscore the impact of the revised joint standards, on September 25, 2015, the U.S. Department of Education released its non-regulatory guidance<sup>2</sup> indicating how state assessment systems must satisfy provisions of the Elementary and Secondary Education Act of 1965 as amended. According to the document, the “Department's guidance reflects the revised *Standards for Educational and Psychological Testing*” (p. 3). Thus, the joint *Standards* document has an impact on U.S. educational testing, and the federal government's endorsement of those standards dramatically underscores their significance.

### How We Got Here

For almost a full century, the majority of standardized tests in U.S. education have been aimed at providing test users with *comparative score interpretations*. Such comparisons were necessary to compare the performance of a test taker who scored at a particular level (in relation to the scores of previous test takers who constituted the test's norm group) with other test takers who had scored at different levels.

A major boost to this comparatively

oriented testing occurred during World War I, when the Army Alpha test was administered to more than 1,750,000 U.S. Army recruits to identify those most likely to succeed in officer training programs. The Alpha, designed to measure recruits' verbal and quantitative cognitive abilities, was an *aptitude* test—that is, a test designed to predict test takers' performance in a subsequent setting. The test proved remarkably effective in isolating the most intellectually able recruits through its comparative score interpretation strategy.

Shortly after World War I, a number of educational *achievement* tests were produced in the United States, such as the Stanford Achievement Tests. Unlike aptitude tests like the Alpha, these tests were not intended to measure students' future success. Instead, they tested students' mastery of particular content, such as their knowledge and skills in mathematics, language arts, or social studies. Influenced by the Alpha's success, these rapidly emerging nationally standardized achievement tests relied on the same test-development strategy embodied in building the Army Alpha—that is, a comparative score interpretation approach. For almost 100 years, such a comparative approach to educational testing has dominated assessment in U.S. schools.

Do tests sometimes need to provide comparative score interpretations? Of course. In most fixed-quota settings in which there are more applicants than the number of available openings, a comparatively oriented measurement strategy can identify the best (or the worst) among a group of test takers. Although the need to arrive at such comparative score interpretations can constitute a useful purpose of educational testing, it's not its sole purpose. What we need today is acknowledgement that validity depends on the purpose for which a test is to be used.

## The Three Primary Purposes of Tests

If the most important consideration in appraising an educational test is the degree to which it yields valid inferences related to the test's proposed use, then it seems obvious we should abandon a century's worth of one-approach-fits-all thinking. We should adopt an approach in which the intended purpose of a test plays the unequivocally dominant role. I suggest we refer to a measurement approach wherein tests are built and appraised according to this strategy as *purposeful educational assessment*.

Instead of a test's purpose being "something to consider," perhaps casually, when constructing and appraising an educational test, purposeful educational assessment requires that the test's primary purpose becomes the overridingly important factor in the creation and evaluation of the test.

To illustrate, consider the screwdriver. In addition to its recognized screw-tightening and screw-loosening function, we can also use it for a host of other purposes, such as poking holes in a can of auto oil. But the screwdriver's *primary* purpose is to insert and extract screws.

An educational test also has a primary purpose. Here are the three primary purposes of almost all educational tests:

■ *Comparisons among test takers.* One primary purpose of educational testing is to compare students' test performances in order to identify score-based differences among individual students or groups of students. The comparisons often lead to the classification of students' scores on a student-by-student or group-by-group basis.

■ *Improvement of ongoing instruction and learning.* A second primary purpose is to elicit evidence regarding students' current levels of learning so educators can make informed

Few people actually understand how today's off-target educational tests contribute to diminished educational quality.

decisions regarding changes in their ongoing instruction or in students' current efforts to learn.

■ *Evaluation of instruction.* A third primary purpose is to determine the quality of an already-completed set of instructional activities. This is often referred to as *summative* evaluation.

One of these three primary purposes must always be paramount in any application of purposeful educational assessment. With that in mind, let's briefly revisit each of the three purposes.

### Comparisons Among Test Takers

Assessing test takers' performance to allow for score-based comparisons is the measurement mission that has dominated U.S. educational assessment for almost a century. We can make these comparisons on a student-by-student basis—for example, when we calculate students' percentile-based status in relation to that of a norm group. Or we can make them by assigning students to such qualitatively distinct categories as *advanced*, *proficient*, *basic*, or *below basic*.

When a test's function is chiefly comparative, decisions might be made about individual students, such as grade-to-grade promotions for 3rd graders whose scores on a standardized reading test indicate their readiness for 4th grade reading. In terms of decisions linked to differences

among groups, we often see schools labeled as "under-performing" if too few students score "proficient" on state accountability tests. Although the "proficient" cut-score might appear to be a set criterion rather than a comparison, what's not apparent is that the most important determinant of the cut score to be used when distinguishing among such performance labels as "proficient" or "advanced" is almost always the test-score comparisons among large groups of students.

But what's important to recognize about comparison-focused testing is that any subsequent decisions we make about test takers—whether it's denying a diploma, bestowing an award, or satisfying some government requirement—are simply *applications* of a test whose primary purpose was to compare.

### Improvement of Ongoing Instruction and Learning

This second purpose of testing is integral to formative assessment, a process in which teachers collect assessment-elicited evidence during an instructional sequence to enable them to adjust their current instruction or enable students to adjust their current learning tactics. Whether focused on groups of students or individual students, the thrust of such testing is to engender more tailored instruction to better meet student needs.

To illustrate, if a classroom assessment indicates that certain low-scoring students are weak in Subskill X and other low-scoring students are weak in Subskill Z, their teacher can then dish out the appropriate subskill remediation instruction to the students who really need it.

Please note that this second primary purpose of educational testing deals with the improvement of *ongoing* instruction and learning for the same students, not *future* instruction and learning involving a different set



of students. We can best improve future instruction by using tests whose primary purpose is to evaluate instruction.

Because this second primary purpose is focused on improving instruction and learning, an effective use of such testing would be to supply *instructionally diagnostic* assessment evidence that would permit teachers to customize their instruction. Diagnostic tests serving this purpose will yield the most useful instructional insights if they contain at least a small number of items measuring students' mastery of an instructionally addressable body of knowledge or cognitive subskill. Although it's usually impossible to totally particularize a set of instructional activities for an entire class of diverse students, even a modest degree of assessment-abetted instructional particularization is surely preferable to none at all.

### *Evaluation of Instruction*

This third primary purpose of educational testing is integral to educators' decisions about whether the instruction they provide for their students is good enough. This testing might focus on a lengthy instructional segment, such as an academic year's worth of reading instruction, or on a lesson that takes up only one or two class periods.

Because tests fulfilling this third primary purpose should help educators tell whether their current instructional efforts are adequate, there's rarely a need for particularization at the level of the individual student. When school district officials or individual teachers are trying to decide whether to alter the instructional program for next year, they'll typically base most of their evaluation-informed decisions on group-aggregated data. For instance, if the teachers and administrators in a particular elementary school are trying

Throughout history, teachers have naturally wanted to know whether their efforts were effective.

to decide whether they wish to adopt a schoolwide emphasis on close reading during the next school year, the evidence to help inform that decision will usually come from all of their students' current scores on reading tests.

Some background can be helpful here. Throughout history, teachers have naturally wanted to know whether their efforts were effective. Yet not until the passage of the Elementary and Secondary Education Act in 1965 were U.S. educators formally directed by the federal government to collect evidence regarding the effectiveness of their instruction—in particular, the effectiveness of those educational interventions that had been federally supported. State-level recipients of a given year's federal funds supporting Program X were required to supply evaluative evidence that Program X had, indeed, been worth what it had cost the nation's taxpayers. All across the United States, almost overnight, educational evaluation was born.

Because appraising the caliber of an educational intervention is typically centered on determining how much students have learned, it was not surprising to see, in the 1960s, an emerging flock of educational evaluators turning to the tests with which they were most familiar. These novice evaluators had almost always relied on students' test scores from off-the-shelf nationally standardized achievement tests distributed by a half-dozen major educational testing firms. And so it has

happened that, for more than a half-century, the evaluation of most U.S. educational interventions, particularly the largest ones, has been fueled by students' scores on nationally standardized achievement tests or, in some instances, on state-developed replicas.

One is struck by the increasingly prevalent use of evidence from such tests to indicate that U.S. schools are "less effective than they ought to be." Interestingly, in almost all of those evaluation-focused applications of a test's results, the tests used haven't been shown to be suitable for this function. More often than not, a *comparatively* focused test has been employed in an *evaluative* role—even though the test was not designed for such a mission.

### **What's at Issue?**

Perhaps the best way to determine an educational test's primary purpose is to identify the decision to be made on the basis of a test taker's performance. If we can isolate this decision, then the test's purpose will almost always become apparent. For example,

- If a school needs to decide which students should be assigned to a special enrichment course in science, then the purpose of a test to help make that decision would be *comparative*.

- If the decision on the line is how to improve students' mastery of a recently adopted set of curricular aims, then the purpose of a test would be *instructional*.

- If a district's school board members are trying to determine whether an expensive tutorial program is worth its cost, then those board members could make a better decision by using a test whose primary purpose was *evaluative*.


However, if purposeful educational testing doesn't guide the way we develop and evaluate tests, then this three-category distinction among purposes is flat-out feckless. To have

the necessary impact, a purposeful assessment approach must, from its conceptualization, influence every major decision along the way.

To illustrate, if a test is being built to improve ongoing teaching and learning, then it's imperative that the test's builders not attempt to measure students' mastery of too many assessment targets. Trying to measure too many targets makes it impossible to assess mastery of particular targets; the test can't include enough items per target to provide sound estimates of students' mastery of that target. Thus, the test's builders must, from the outset, resist ill-conceived demands to measure too much. Prioritizing proposed assessment targets can help identify a manageable number of targets that can contribute to improved instruction.

A word of caution here: Attention

to a test's purpose should not be an innocuous exercise in verbally explicating a test's measurement mission. On the contrary, the primary purpose of a particular educational test—from the very get-go—should *dominate* the decision making of those who are building the test as well as those who are evaluating it. Currently, emphasis on purpose is absent from U.S. educational testing.

One possible way for educators, and particularly for educational policy-makers, to begin deriving dividends from purposeful educational testing is to start demanding what the new joint Standards call for—namely, *evidence* that a given educational test is, as the Brits say, “fit for purpose.” 

<sup>1</sup>American Educational Research Association, American Psychological Association, National Council on Measurement in Edu-

cation, and Joint Committee on Standards for Educational and Psychological Testing. (2014). *Standards for educational and psychological testing*. Washington, DC: Author.

<sup>2</sup>U.S. Department of Education. (2015, September 25). *U.S. Department of Education peer review of state assessment systems: Non-Regulatory guidance for states*. Washington, DC: U.S. Department of Education, Office of Elementary and Secondary Education.

*Author's note:* This article is based on the author's Robert L. Linn Distinguished Address Award presentation, *Invitation to an Insurrection: A Call for Fundamentally Altering the Way We Build and Evaluate Educational Tests*, to be delivered at the American Educational Research Association Annual Meeting, April 8–12, 2016, Washington, DC.

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# GRADING

## Why You Should Trust Your Judgment

*Although computerized grading programs have advantages, teachers' judgment has been shown to be more reliable.*

**Thomas R. Guskey and Lee Ann Jung**

**A**sk teachers today to describe a student's learning progress, and most will begin by opening their computerized gradebook. The teacher will look over the student's scores, and then skip to the summary grade. The gradebook typically allows the teacher to attach various weights to different assignments and assessments in calculating the summary grade, and it may also sort scores according to specific learning targets or standards. The teacher will explain how the grading program precisely computes the summary grade in the same way for all students and records that grade on a report card that is shared with parents at the end of the marking period.

Computerized grading programs are ubiquitous in modern education. They rank among the best-selling computer software in education, with more than



40 programs currently available.<sup>1</sup> They appeal to teachers because they simplify record keeping and seem to objectify grading. Their data management capabilities make it easy for teachers to enter and precisely tally large amounts of numerical information on students' performance. They are particularly well-suited to the needs of middle and high school teachers, who generally record data on the learning progress of more than 100 students weekly (Guskey, 2002).

Despite their many advantages, however, computerized grading programs also have drawbacks. In particular, their pervasive use has caused teachers to doubt their professional judgment. Instead of looking carefully at the array of data on students' performance and making thoughtful decisions about what grade best describes what students have achieved, teachers rely on the grading program's statistical algorithms to calculate grades. In teachers' minds, these dispassionate mathematical calculations make grades fairer and more objective. Explaining grades to students, parents, or school leaders involves simply "doing the math." Doubting their own professional judgment, teachers often believe that grades calculated from statistical algorithms are more accurate and more reliable.

### Computer-Generated Grades: More Accurate?

But *are* the grades that are determined by computerized grading programs fairer? Are they truly more objective than those based on teachers' professional judgment? Are they more accurate and reliable?

We frequently test this idea by asking groups of teachers to consider the data in Figure 1. These data represent a particular student's scores from six assessments of learning during a grading period. The top row shows the date of each assessment, and the bottom row shows the student's scores on the assessments (derived from a well-designed rubric). A score of 1 represents the lowest level of performance; 4 represents the highest.

To determine what summary grade to record, teachers generally combine scores from multiple

## Computerized grading programs are ubiquitous in modern education.

sources of evidence gathered over time. So in our research, we ask groups of teachers, Given the scores shown here and Gloria's pattern of performance, what summary grade should she receive for this learning target? We ask them to *first* answer this question by using their professional judgment—simply looking at this pattern of scores and deciding whether Gloria deserves a grade of 1, 2, 3, or 4—before turning to a statistical algorithm.

**FIGURE 1. A student's scores from six assessments of a learning target.**

Student	Learning Target #1						Summary Grade
	9/9	9/14	9/22	9/27	10/3	10/6	
Gloria	1	1	1	1	4	4	?

Typically, 80 percent or more of the teachers at all grade levels agree that Gloria should receive a summary grade of 4. Although she struggled during the first part of the grading period, Gloria's recent performance clearly reflects that she has mastered this learning target.

Next, we show teachers the summary grade that would result using a computer-generated algorithm. Computerized grading programs typically offer the choice of several statistical algorithms for determining a student's summary grade. The most common algorithms include the mean (the average score); median (the middle score); mode (the most frequently appearing score); and the trend score (a score pattern analysis). Although each option computes the summary grade in an impersonal, objective way, the choice of which algorithm to use is highly subjective and could yield widely divergent results.

The default algorithm in most computerized grading programs is the mean, or average, score.

If the teacher chooses this method, Gloria will receive a summary grade of 2. If the teacher selects the median or mode score, Gloria's grade will be 1; if the teacher chooses the trend score, it will be 2.7 or, rounded up, 3 (Marzano, 2000). So depending on the statistical algorithm chosen, Gloria could receive a summary grade of 1, 2, or 3. No algorithm would result in a grade of 4.

### What About Reliability?

Reliability is an index of consistency in measures or responses and a necessary prerequisite for validity. Unreliable measures can never be valid. Calculations of reliability range in value from 0.0 to 1.0. Researchers generally consider .8 as a minimal level of reliability in measures that have important consequences for students, such as grades.

Researchers have several ways of computing reliability. In situations like calculating a student's grade, researchers would be most concerned with *inter-rater reliability*, the degree

**FIGURE 2. Five students' scores from six assessments of a learning target.**

Student	Learning Target #1						Summary Grade
	9/9	9/14	9/22	9/27	10/3	10/6	
Gloria	1	1	1	1	4	4	?
Ralph	2	1	2	3	3	3	?
Alice	2	2	4	4	4	3	?
David	3	1	3	2	3	1	?
Ellen	2	3	2	3	4	4	?

to which equally knowledgeable and competent judges or raters—in this case, teachers—can look at the same evidence and consistently make the same decision regarding a summary grade. If raters consistently come to the same decision, the summary

grade would be considered a reliable measure.

Consider several teachers looking at the data in Figure 1. If all teachers used the same statistical algorithm, all would assign Gloria the same summary grade, and the grade would be considered highly reliable. But if teachers varied in their choice of statistical algorithms, the resulting summary grades would vary, with some 1s, some 2s, and some 3s. Because of this variability, the summary grade would be considered an unreliable indicator of Gloria's true performance. So even though each algorithm would yield a precise grade, differences among teachers in their choice of algorithm would make that grade unreliable.

### Consider the Purpose

Let's suppose that instead of relying on a computerized grading program's statistical algorithm, teachers got together and determined the purpose of a summary grade. And suppose that after considering different points of view, they reached consensus that the

Only by relying on their professional judgment can teachers individualize the grading process.



purpose of the summary grade is, “To best describe the student’s level of proficiency regarding the learning target at this time.”

We have asked the same group of teachers to determine what summary grade Gloria should receive for the learning target, using their judgment and keeping this purpose in mind. We remind them that they know nothing about the subject area involved, the grade level, the learning target, the nature of the assessments—or Gloria. They have only numbers, which is all their computerized grading program has. In every instance, more than 90 percent of teachers conclude that Gloria’s summary grade should be a 4. Researchers would consider this an exceptionally high level of inter-rater reliability.

### **A More Complex Example**

Some might argue that the case of Gloria is obvious and simplistic. They might justifiably question whether the same high level of reliability in teachers’ professional judgment would be obtained in situations in which the patterns of students’ performance were less consistent.

To explore this question, we next invite our groups of teachers to consider the scores of the five fictitious students shown in Figure 2. In each case, we ask teachers to use their professional judgment to determine each student’s summary grade, keeping in mind the stated purpose: To best describe the student’s level of proficiency regarding the learning target at this time. In every instance, teachers are remarkably consistent in determining students’ summary grades—when they ignore the math and rely on their professional judgment.

In the case of Ralph, for example, all teachers note his consistent performance on the three most recent

assessments and assign a summary grade of 3. Alice poses an anomaly: On three assessments, she scored at the highest level, but she dropped to a 3 on the most recent assessment. After some discussion, most teachers conclude that something unusual may have affected Alice’s performance on that last assessment. Perhaps an event outside of school—such as a distressing family issue—influenced her score. Being reluctant to give Alice

include an option available in many programs that allows teachers to base the summary grade on the most recent score. Figure 3 (p. 54) shows these grades, along with the grade chosen by the overwhelming majority of teachers involved in this experimental grading session. The summary grades determined by algorithms that differ from those chosen through teachers’ professional judgment are in red.

In more than half the cases, the

## **Computers use only numbers; they know nothing of the individual students who produced those numbers.**

a lower grade because of this single, anomalous score, most teachers give her a 4.

David presents the most inconsistent data. On the first assessment of the grading period, David received the highest score in the group; on the final assessment, he received the lowest. Even given this erratic pattern, however, teachers are remarkably consistent. Few say David deserves a 1 (his most recent score), and no one assigns a 4. Generally teachers are evenly divided between a summary grade of 2 or 3.

Ellen’s scores fluctuated between 2s and 3s early in the grading period, but she received 4s on the two most recent assessments. Almost all teachers conclude that Ellen should receive a summary grade of 4.

After teachers complete this task, we show them the summary grades these students would have received if their teachers had relied on one of the statistical algorithms offered by their computerized grading program. We

summary grade determined by a statistical algorithm differs from the summary grade teachers chose using their professional judgment. In Gloria’s case, it can differ by as much as three grade categories. No algorithm would yield the same grade as teachers’ professional judgment in every case.

If teachers chose these five algorithms with equal frequency (an unlikely scenario), the resulting reliability would be only about .6. Researchers would consider this a dubious level of reliability. When teachers use their judgment, however, the reliability is always .9 or greater. And we can assume that if teachers had knowledge of the students, the subject area, and the assessments as they considered these scores, their professional judgments would be even more consistent.

### **Trust Your Mind, Not Your Machine**

As these examples reflect, teachers’ thoughtful and informed professional

**FIGURE 3. Algorithms yield summary grades different from grades derived by teachers' professional judgment**

Student	Algorithm Used to Calculate Grade					Teachers' Professional Judgment
	Mean (Average)	Median	Mode	Trend	Most Recent Score	
Gloria	2	1	1	2.7	4	4
Ralph	2	2.5	3	2.7	3	3
Alice	3	3.5	4	3.5	3	4
David	2	2.5	3	2.3	1	2 or 3
Ellen	3	3	—	3.2	4	4

Numbers in the rows represent the summary grade given to each student using the data shown in Figure 2. Numbers in red indicate a summary grade determined by an algorithm that *differs* from the summary grade for that student determined by teachers' judgment. (There is no mode score for Ellen because her three scores all occur with the same frequency.)

## Although each algorithm computes the grade objectively, the choice of which algorithm to use is highly subjective.

judgments yield greater consistency in determining students' grades than do varied statistical algorithms. The takeaway message for teachers is, trust your mind instead of your machine (Jung, 2014). Teachers at every level *must* be able to defend the grades they assign and *must* have evidence to support their decisions. To serve as meaningful communication, grades must be fair, accurate, and reliable. They are more likely to be so when thoughtful professionals concur on the purpose of grades, look at the evidence they have, and then decide the grade that best summarizes that evidence.

Computers use only numbers. They

know nothing of the individual students who produced those numbers, the learning environment, or the nature and quality of the assessments. Can having such knowledge sometimes result in teacher judgments being biased positively or negatively? Of course. But our experience indicates that this broader knowledge more often leads teachers to fair, accurate, and meaningful judgments.

For some students and some purposes, a grade based on a statistical algorithm may be fair and accurate. But rigidly applying the same algorithm to determine grades for all students in all classes distorts as often

as it clarifies. Some computerized grading programs allow teachers to use different statistical algorithms in different classes. But no program allows teachers to vary the algorithm used from student to student within a class. Only by relying on professional judgment based on a clearly defined purpose can teachers appropriately individualize the grading process.

Grading is more a challenge of effective communication than a simple documentation of achievement (Guskey & Bailey, 2010). Teachers who trust their own minds—knowing that informed colleagues would likely make the same judgment—offer grades that communicate meaningful, reliable information to all. [a](#)

<sup>1</sup>For a list of some of the many available computerized grading programs, see [www.educationworld.com/a\\_tech/tech/tech031.shtml](http://www.educationworld.com/a_tech/tech/tech031.shtml) or [www.capterra.com/gradebook-software](http://www.capterra.com/gradebook-software).

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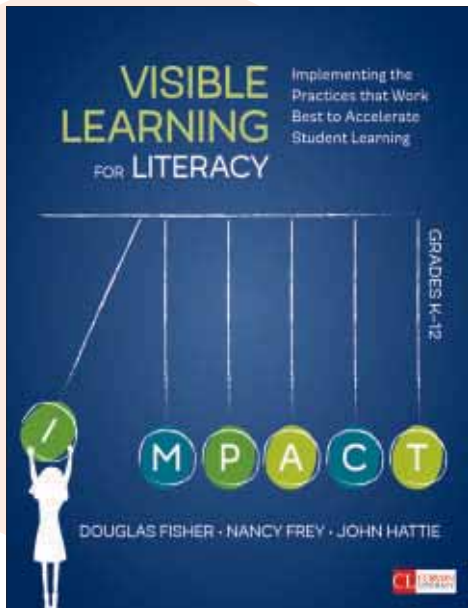
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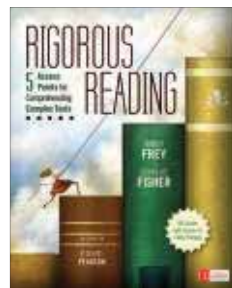
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# How I Learned to Be Strategic about Writing Comments

*By setting up ways to get frequent feedback from students' works in progress, we can find out what they need—before it's too late.*

## **Cris Tovani**

**S**everal years ago, I decided that if I were going to spend time writing comments on my students' writing work or on assignments connected to their in-class reading, those comments had to do more than justify a grade. They had to give targeted feedback that would show students how to improve the quality of their work.

I'd been finding the hours I spent writing feedback on students' work discouraging. For one thing, students didn't pay attention to my comments, and, for another, the quality of their work wasn't improving. A change in how I responded to their work was necessary.

If I wanted my comments to fuel

improvement, I realized, I had to build in time for learners to revise their work after receiving my suggestions. Not only did I change the timing of my feedback, but I also streamlined my process of writing comments, allowing myself more time to shift instruction in response to what I'd learned from reviewing work.

### **Lessons from a Coach**

A conversation I overheard last fall between two teachers who were also coaches helped me think how I might improve my feedback. During a break from the professional development session, I overheard this exchange between the head basketball coach and the offensive coordinator for the school's football team:

**OFFENSIVE COORDINATOR:** David [the quarterback] comes to dinner on Sunday nights.

**HEAD BASKETBALL COACH:** Really, why?

**OFFENSIVE COORDINATOR:** After we eat, we go over game films. I have a chart with the plays numbered on a clipboard. We review each offensive series, and in between plays, we stop and David talks about what he thinks went well and what he would change if he had another chance.

**HEAD BASKETBALL COACH:** Interesting.

**OFFENSIVE COORDINATOR:** If David thinks the play was executed well, he puts a checkmark next to its number, and we move on to the next one. If he doesn't think the play went well, we talk about his options. He jots down notes on what to practice and pay attention to the following week.

At this point, I saw the connection between the way this coach reviewed a player's performance and the ideal way teachers might review students' work. "That's a great idea," I thought. Talk about using reflection to improve performance! The quarterback is the ultimate user of the game film and the coach's expertise. He's getting a chance to reflect on his performance, and the coach is giving him a chance to use his feedback to improve what he does for the next game.

In a perfect world, teachers and

students would work together toward a common goal, like athletes and coaches do. Students would care about the feedback we give them as much as we do. Like most teachers, I don't live in that perfect world—but I've made changes to how I teach and how I guide teachers in my current role as an instructional coach and consultant.

### Putting Time Where It Matters

First I realized that I needed to use my time where it matters most. By spending the majority of my time grading final papers and assessments, I was missing too many chances to help students get better. Where I really needed to give feedback was *before* final assignments were due. I needed a chance to reteach concepts, and students needed a chance to revise.

This was true for both reading and writing assignments. I decided to build in opportunities to help students as they read complex texts, not just give a final test on our class novel.

I now use frequent “comprehension checks,” which some students refer to as quizzes, throughout reading assignments. These checks always use the same four-question format, measuring how well students can summarize, analyze the author's craft, annotate a text, and make inferences.

For a reading selection from *The Things They Carried* by Tim O'Brien, for instance, the check might use these four questions:

1. Please summarize what you read. List five to six plot points.
2. Throughout the chapter, the narrator describes what the soldier looked and acted like when he was alive.

Rather than grade or notice everything, I decide beforehand on which qualities of students' reading to give feedback.

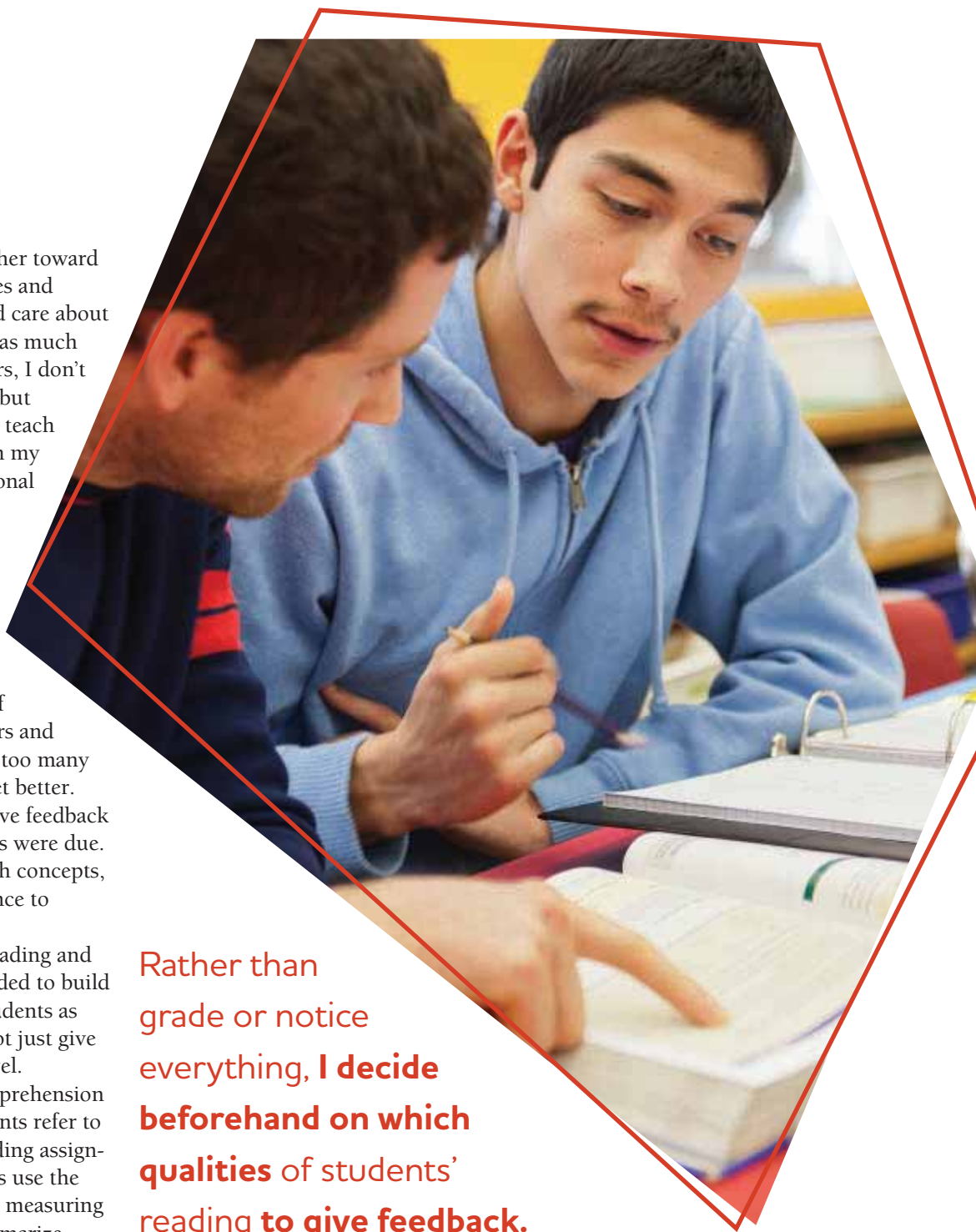
What purpose might this serve? Try to infer what the author is hoping to convey to readers.

3. Read the following passage and annotate it in the margin to show your thinking: “If he could not fight little boys, he thought, how could he ever become a soldier and fight the Americans with their planes and helicopters

and bombs? In the presence of his father and uncles he pretended to look forward to doing his patriotic duty. . . but at night he prayed with his mother that the war might end soon.”

4. Discuss how this quote connects to a bigger idea or reflects a particular theme.

My goal with this structured comprehension check is to give students a purpose for their reading and a way



to sift and sort what's important. I quickly grade each reading check and pass them back the next day. I don't spend lots of time writing comments because when I return reading checks, I give each student a completed answer key showing exemplar answers. Students compare my criteria of success with their performance and reflect on how my responses are alike or different from theirs.

### Looking for Patterns

Changing how I spend time with student work changed how I grade assignments. Writing teacher and author Kelly Gallagher once told me, "Improvement starts with volume. Volume suffers if I have to grade everything. Grading doesn't make kids better. Volume, choice, and conferring makes kids better." Kelly strives to help his students write four times more than he can grade.

I agree with Kelly. It's not only true that teachers can burn themselves out trying to give students feedback on everything, but it's also true that what's most essential to improving the quality of students' work is collecting feedback for ourselves from that work and noticing patterns in students' skills (or lack thereof) that we can use to determine our next instructional moves. I don't have to always write the perfect comment or give a grade.

If students bomb one of my four-question comprehension checks, for instance, I don't let them retake it because they've already seen my answers. Instead, I make a copy of the chapter that the comprehension check focused on and give students the opportunity to read and annotate it. We then quickly chat about their annotations. Each reader must show me what he or she noticed about the author's craft and how, as a reader, he or she went beyond plot to infer theme. On the basis of the quality of their annotations and our individual

## FIGURE 1. Silent Reading Think Sheet

**Yearlong Target:** I can read to learn about myself and the world around me.

**Remember:** 67 minutes a day grows good readers!

### Learning Targets:

1. I can improve my reading comprehension and stamina by sticking with a book I can read.
2. I can monitor my inner voice to help me remember what I read.
3. I can share how my reading reflects new thinking.

Name: \_\_\_\_\_

Title of Book: Crossover

Page I started on 3 Page I ended on 35 Total pages read 32

Time I started 8:00 Time I stopped 8:30 Total minutes 30 min

How well did you meet the 2nd learning target? What made you stop reading? What do you remember reading?

*Two brothers who are twins love basketball, and they are actually the stars of their team. The boys are in middle school, and it seems like they will deal with middle school issues. The father is a former pro basketball player, and the mom is the vice principal of the school. I would have hated if I went to a school where my mom was the vice or assistant principal.*

How well did you meet the 3rd learning target? What were you thinking as you read? In at least FOUR sentences include: questions, connections, opinions, new thoughts, and/or ideas that you think are important.

*I bet as the book goes on, we'll see that the twins are opposites. Josh seems really stuck up. I'm not really sure about his brother Jordan. I'm totally confused on page 13. Is the backseat, the bus? Does Josh have dreads? Is that what he means by locks? I love the words on page 20. I think the quote is about trying your hardest with the things you love.*

discussions, I add points to each student's original reading check grade.

When I remember that getting feedback is more powerful than giving feedback, the task of looking at student work is more manageable. According to John Hattie's (2009) synthesis of feedback research, teachers who spend hours giving feedback might not be getting the biggest bang for their buck. Hattie writes, "It was only when I discovered that feedback

was most powerful when it was from the student to the teacher that I started to understand it better" (p. 173).

Now, as I teach or guide other teachers, my rule of thumb is: Give students daily opportunities to leave tracks of their thinking, use those tracks to notice patterns, and adjust instruction on the basis of what kids know and what they need. Repeat the cycle. I've developed the following processes and tools to check how stu-



dents are really doing in their assigned reading and where they need help.

### *Silent Reading Think Sheets*

This tool captures students' thinking as they read their free-choice books or an assigned text. Stapling several sheets together helps me—and students themselves—see growth over time. When I confer with students, we can go back to their silent reading sheets and together discuss patterns of growth. I can tell whether students are sticking with a book or regularly abandoning books they've started. I can assess endurance and notice how summary writing skills are developing. I can also examine the quality of reading responses—which helps me know which students are pushing themselves and which are faking it.

See Figure 1 for a sample think sheet a middle school student completed after reading part of a text. From the student's responses, I can tell that he's just starting the book; that might be why the summary and response are so literal. I would plan to check on this student's next silent reading sheet to see whether he's going beyond plot to inferring or making predictions. The reading minutes and number of pages are good, but this novel is an easy book for this reader. I would monitor reading endurance and future book choices to see whether he's being pushed a bit more.

### *Exit Tickets*

At the end of class, I ask students to write on a half sheet of paper one thing they figured out and one thing they wonder about related to the reading or the day's lesson, and turn this in. The first chance I have, I find a big table where I can sort the tickets into similar comments and questions. I read what students think they understood, for instance, to see if they left with the information I wanted them to know—or with misconceptions. Next, I look

Before going through a stack of annotations, I set a limit for how many comments I'll give.

for patterns in their questions. Are the same questions coming up? Are there any unusual questions I could share with the class that might drive the next day's reading? Whose questions indicate that they're lost? I don't waste time writing comments; I simply look for patterns, and when I've figured out a few, I throw the tickets away.

I make a note to touch base with students who don't respond at all to ask them why. Did they run out of time? Did they not learn or wonder anything? Do they think I'm not interested in what they have to say?

### *Response Journals*

Students use individual composition notebooks to reflect on their learning for the day. Early in the year, I post questions for kids who may not be sure how to begin (such as, What worked for you today? What do you need to keep going? What new information struck you? How will you use what you've learned today?)

Instead of taking everyone's journals home to respond to that evening, I look at and respond to a third of them during my planning period, take another third home, and look at the rest first thing in the morning. I limit my comments and challenge myself to identify patterns.

Exit tickets and response journals help teachers quickly assess student thinking. Both the most advanced stu-

dents and the strugglers can use these tools to show their teacher what they know.

### **Streamlining the Process**

As I use each tool, I set parameters for myself. I decide beforehand which qualities of students' reading and thinking I want to analyze and give feedback on.

For instance, I often assign students to annotate a passage of a classwide text, demonstrating how well they are doing specific kinds of thinking. Before going through a stack of annotations, I set a limit for how many comments I'll give. As I read students annotations, I try to write questions that will push their thinking. I might ask why a character said what he said, or ask why they think a certain action happened. Sometimes, I write a quick comment to clear up misconceptions or label something students have done well so they can share the technique or thinking with a peer.

While commenting, I record what I notice on a piece of notebook paper divided into four columns. When three or more kids demonstrate a similar struggle, I make a note of it. Figure 2 (p. 60) shows a sample chart describing what I noticed as I read through students' annotations on a section of *The Great Gatsby*.

After I complete a chart like this, I prioritize what students seem to need most. For each column, I try to determine what's important in this work, identify patterns, and get ideas for how I might change my instruction. For the "Skills and Strategies" column, for instance, I ask myself, Do students need models of weak and strong work? Do they need more instruction on how to use this strategy? More time to practice the skill before the final demonstrations of understanding?

In considering students' vocabulary use, I ask questions like, Are the words

**FIGURE 2. Review of Students' Annotations to Passage from *The Great Gatsby*.**

Students' Use of Skills and Strategies	Confusing Vocabulary	Students' Questions Related to the Reading	Information to Skillfully Read a Genre or Text Structure
<p>A small group of kids aren't annotating (David, Xavier, Jose, and Shanille). Find out why.</p> <p>Lots of kids aren't using quotation marks to tell who is talking. They are losing track of the speaker.</p>	<p>Words students don't understand:</p> <p><i>love nest</i></p> <p><i>billow</i></p> <p><i>pompadour</i></p> <p><i>border</i></p> <p><i>scanty</i></p>	<p>Questions that show student confusion:</p> <p>What is the significance of the song on p. 95?</p> <p>Who is Dan Cody and what are his connections to <i>Gatsby</i>?</p> <p>Who is Klipspringer?</p>	<p>Students are reading the text literally.</p> <p>Do students understand the tone?</p> <p><b>Mini-lesson idea:</b> Students seem unsure of how authors show the inside of characters. Do students know to notice what characters say and do and to then infer traits?</p>

Source: From *So What Do They Really Know* (p. 95) by Cris Tovani, 2011, Portland, ME: Stenhouse. Copyright © 2011 by Cris Tovani. Adapted with permission.

using this review to notice patterns about students' strengths and weaknesses—and deciding what lessons to teach on the basis of those patterns? Or are you trying to fix everything for them? (3) Do students have an opportunity to revise after they get your feedback—or is it a one and done?

Since I've begun limiting my comments and using more time to peruse patterns of understanding, I've found that I have more time to plan how I'll build in opportunities along the way for students to show what they know. As much as we'd all like to coach kids one-on-one, we can't. Getting feedback from student work and giving students feedback to advance their learning are both essential, but educators have to be strategic in how we use these instructional moves. In the

end, both teacher and students have to get smarter. **EL**

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students don't know antiquated (and perhaps less important to teach) or high-frequency words? Are they rarely used words, or ones that will help readers understand complex ideas? Do the words have similar prefixes, suffixes, or roots that I can clump together into a word-part lesson?

In the column called "Students' Questions Related to the Reading," I consider whether knowing the answer to a question is necessary to understand the plot or a key concept. For example, in *The Great Gatsby* annotations, several students wanted to know who Dan Cody was. If students don't know this, it could interfere with comprehension, so I simply reminded them that Cody was the yacht owner *Gatsby* saved from drowning and then went on to work for—and he was a

model for *Gatsby* on how to "act rich." If the same question keeps coming up for multiple students, it's worth addressing with the class. I consider how I might use that question to propel students to think.

And for the fourth column, on helping students read this genre skillfully, I identify the text structures students need to recognize.

### Getting Closer to that Perfect World

If you find yourself complaining about the amount of time you spend writing on students' work and frustrated that the work isn't getting better, ask yourself three questions: (1) Are you commenting on everything students produce—or limiting your responses to a few aspects at a time? (2) Are you

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CHECKLIST

*Instead of just handing students a checklist to help them revise a piece of writing, why not teach them to reflect on—and take ownership of—their work?*

**Gabrielle Nidus  
and Maya Sadler**

It's Friday and the students are sitting at their desks, using a checklist to quietly revise their narrative writing. For some students, the areas they check as "needing improvement" remain consistent throughout the year. Other students simply mark off a skill as "mastered," with scarcely a glance at the piece of writing in front of them.

Although analyzing student work has become an increasingly popular way for teachers to improve student learning,<sup>1</sup> teaching students how to analyze their own work has received less attention. This important strategy entails teaching students how to make careful observations of their writing, set goals, and monitor their own progress—skills that are the backbone of college and career readiness.





PHOTO BY KEVIN DAVIS

The writing workshop offers a prime opportunity for providing such instruction. For most educators, teaching students to look deeply at their writing and make changes on the basis of their observations is, perhaps, one of the most arduous parts of the writing process. We acquaint students with the techniques of good writing in one mini-lesson after another, but we often forget to teach them how to dig deeply into revision and notice aspects of their writing style for the purpose of making improvements. We leave students with little more than a checklist in hand as they look at their work. And, too often, we notice that students have trouble extending those skills they've checked off as "mastered" to other writing tasks.

Teaching students to learn from their own writing requires recognizing the underlying metacognitive strategies people use when analyzing work. We call this process *the art of noticing*. It comprises three key concepts: noticing and observing, setting goals, and monitoring and evaluating.

### Noticing and Observing

As teachers, we often instruct students on what to notice about their writing, whether it's punctuation or descriptive details. But how often do we have them reflect on what they tend to revise in their writing? What stands out to them? What's hardest for them to notice about their own work? How does what they notice as readers correspond to what they notice as writers?

One 4th grade teacher, Ms. Cotton, helped students as they wrote an expository essay about the African American struggle for equality during the civil rights movement. She'd noticed previously that several students needed more work on supporting their thesis by adding details and elaborating on how the information builds their claim. When Ms. Cotton looked at Aniyah's first draft (see Figure 1, p. 64), certain areas jumped out, but as this dialogue shows, she let Aniyah take the lead in sharing what she noticed.

MS. COTTON: Look at your organizer and your draft and tell me what you notice about your writing.



ANIYAH: I noticed that I wrote about people that helped with the struggle for black people.

MS. COTTON: Who were those people?

ANIYAH: Rosa Parks, Jackie Robinson, and Barbara Jordan.

MS. COTTON: I want you to look at each person you mentioned and use your marker to underline what you wrote about them.

ANIYAH: Well . . . I wrote about Rosa Parks, but I didn't really write a lot about Jackie Robinson or Barbara Jordan.

### FIGURE 1. Aniyah's Draft Essay on African American Struggles

#### THE STRUGGLE FOR EQUALITY

Today I read about the struggle of afracan americans.

Many years ago african americans people were treated poorly. Rosa Parks had to give up her bus seat to a White male because the city law said black people have to give up there seat to White people. Rosa Parks did not want to give up her seat.

Jakie Robinson was a luttenite He was in the army. Jackie Robinson was also in a league baseball team. Barbra Jordan was elected to the U.S representative. Jordan always believe that if people worked hard they could overcome any barriers and become successful.

Source: Published with parental permission.

MS. COTTON: Why not?

ANIYAH: I thought that I wrote more about how they were treated but I didn't. . . . I think I didn't notice that I only added a little bit of information. Sometimes I get so excited about what I am writing that I think I wrote something, but then I go back and see I didn't write it. Sometimes, I'm in a hurry to get it done and I forget to add everything.

MS. COTTON: What strategies do you think you could use to help you notice that you're missing items?

ANIYAH: I could read my paper aloud and highlight notes from the article to make sure I added those things in my paper. I could also check off the details on my organizer as I use them for my essay.

**To be able to notice, observe, and effectively evaluate their own writing, students must write—a lot.**

A week later, they reconvened and Ms. Cotton asked her about the revisions she'd made.

ANIYAH: Well, I added a lot more details about each person. I realized I didn't have a lot of information about Barbara Jordan, so I took her out and added Langston Hughes because I felt like I knew more about him and he fit well into the essay.

MS. COTTON: How did you figure out what details to choose for each person?

ANIYAH: I wanted people to learn about their lives and how they had to struggle. That's why I talked about how Jackie Robinson and Langston Hughes felt. I thought that would make it more interesting for someone to read and that they could relate to it.

In conferencing and in mini-lessons, Aniyah reflected on the revision process, acquiring skills she can use in this essay and in future writing. She noticed something about herself as a writer. As students begin to develop a concept of their revision process, they become aware of their own internal processes or noticing. Revision becomes more than simply a mark on a checklist that one does for the teacher. This self-awareness is of utmost importance for students as they begin to challenge themselves to look at their writing in a new way and apply new skills to various types of writing.

#### Focused "Looking"

When we think about the impediments to noticing, one of the first challenges that comes to mind is not knowing *what* to notice. Many teachers might respond that the teacher-provided checklists highlight what students should look for in their writing. However, many students never internalize this checklist. Rather, they wait for the teacher to remind them what to notice.

Both veteran and novice "noticers" may experience distraction in this process. Even a two-page essay can seem as wide as the ocean, filled

as it is with a whole world of words, letters, punctuation, and content to revise. To streamline the process, teachers typically have students examine their work through two different lenses: that of revision and that of editing. A student engaged in revision makes changes in content and contemplates the language he or she used, whereas a student focused on editing notices the more technical aspects of writing, such as spelling, punctuation, and grammar. However, for many individuals, these two categories may still be too expansive, leaving students adrift with too much to notice.

One strategy to help students maintain their focus is simply to cut back on what they're asked to notice. Have students choose one specific focus for their revision and then monitor that focus through the course of several pieces of writing.

Consider Aaron, a 4th grader, who's writing a persuasive piece. Aaron's teacher helps him narrow his "looking" by having him choose a specific focus from a writer's checklist. Instead of having to revise multiple aspects of his writing, Aaron instead focuses his observations on the effectiveness of his arguments. He writes the key points of his essay on notecards and lines them up in order of most to least powerful. In his discussion with a writing partner, he discovers that two of his points are similar. He reworks his idea to present a fresh and unique argument. Rather than becoming overwhelmed by all the things he might notice and change during the revision process, Aaron has a tight focus that helps him practice this technique of evaluating one's ideas.

Teachers can help reduce the distractions students experience during the revision process by teaching them strategies for keeping their focus. Try these strategies: reading their work aloud, highlighting specific paragraphs or sentences, and framing the selection they're focusing on. "Bottom up" editing—reading from the last paragraph to the first—can help students pay attention and notice aspects of their writing that may not have otherwise stood out when they read everything in the correct order. Students might also create checkpoint paragraphs to remind themselves of their intent. For instance,

**Even a two-page essay can seem as wide as the ocean, filled with a whole world of words, letters, punctuation, and content to revise.**

when Aaron looks through his essay, he puts a star beside certain sentences to denote checkpoints where he'll stop and ask himself how the previous sentences develop his argument.

### **Setting Goals**

Teaching the art of noticing requires that students engage in goal setting. Too often, we either assign students a goal (such as making their thesis statement stronger) or ask them to choose a goal without giving them sufficient time to develop, articulate, and rationalize this objective. Teaching goal setting is a worthy use of time; it's a lifelong skill that students will use in both school and the workplace. As students take the time to consider their goals and decide how they will monitor their progress, they define what they will notice. Thus, goal setting and noticing are inextricably linked.

As students study various authors, they come to understand that those authors have a particular signature, area of interest, or tone that's reflected in their writing. Students should select their goals to help them understand *their* identity as authors, which means we need to help strengthen the connection they make between reading and writing.

Goals should be rooted in an authentic understanding of writing and a deeper understanding than simply, Do your sentences begin with capital letters? or, Did you use three new vocabulary words in your essay?

The cycle for goal setting can help students identify areas to strengthen in their writing. Johan, a 5th grader, was impressed by the descriptive way his favorite author Kate DiCamillo wrote. He had highlighted this sentence in her book *Tiger Rising* (Candlewick Press, 2002): "He made all his feelings go inside the suitcase;

he stuffed them in tight and then sat on the suitcase and locked it shut” (p. 4).

In his first attempt at goal setting, Johan wrote, “I want to use more descriptive language.” After meeting with his teacher and discussing his goal, he revised it to read, “I want to describe my characters and setting in a unique way and try to use metaphors, similes, or symbols to make the reader better able to picture the ideas in his mind.” Johan determined that he would measure progress toward this goal by noting with a star the parts of his story where he attempted to do this and by asking three students for their feedback about those parts. Instead of engaging in an overly broad peer conference, he asked for more focused feedback. This, in turn, supported his peers, who were now better able to provide the specific feedback he needed to help him reach his goal.

### Evaluating and Monitoring

In this phase of the process, there’s a shift from the teacher being the chief evaluator and monitor of writing to students taking ownership as authors and evaluating their own work.

A conference is a good setting for helping students identify how they can monitor their progress. Student reflection is integral here. As part of the reflection process, students analyze their writing goals over time and the progress they’ve made toward those goals. Students don’t need to wait until their drafts are finished to begin monitoring their progress. Reflecting on their progress toward their objectives as they draft affords them the opportunity to reflect on and improve their writing throughout the writing process. Here’s how Aniyah analyzed her draft as she proceeded to answer questions provided by Ms. Cotton:

■ *What was the purpose of this par-*

*ticular writing?* This paper was written to inform. I wrote this for Black History Month. I can teach people more about black history and I can learn more about black history.

■ *What more could I say about this topic? What is preventing me from writing more, and what resources could help me elaborate?* I can add that you can learn

a lot from reading the topic. The thing that’s preventing me from writing more is I had problems finding text evidence.

■ *What feedback has my teacher or peer(s) given me about my previous writing samples? Does that feedback apply to this writing?* Some feedback peers gave me is that I could’ve written more details. I think this relates to this writing because I know about Rosa Parks, Jackie Robinson, and Langston Hughes and could have used some of the things I already knew about them in the paper. . . . Informing papers have a lot of details.

### Re-Envision Revision

To be able to notice, observe, and effectively evaluate their own writing, students must write—a lot. They need to have a stream of multiple writing samples so they can look at their writing over time and monitor their strengths and challenges. It’s not enough for students to have portfolios that are benchmarked at the end of the quarter or semester. They must write daily, intensely, and across a wide spectrum of genres, and they must have frequent opportunities to evaluate their progress.

As authors, we engage in several iterations of rereading, revising, and

tweaking our work until we’re satisfied that the words on the paper speak to the thoughts in our heads. We must teach students to pay attention and read through their writing—narrowing, focusing, and refocusing their lens as necessary.

A word of caution here. Many students write to complete a task or respond to a prompt.

Although there may be appropriate places for such cold writing, the heart of writing experiences for students must be *warm*—in other words, meaningful and connected across the curriculum so students realize how putting their thoughts on paper helps them understand not only the content presented, but also who they are as writers.

The art of noticing can help students engage in the writing process at a much deeper level. Not only will they come to understand the nuances and traits of being an effective writer, but they’ll also learn to see themselves as authors. ■

<sup>1</sup>Blythe, T., Allen, D., & Powell, B. (1999). *Looking together at student work*. New York: Teachers College Press.; Nidus, G., & Sadler, M. (2009). Learning from student work. *Educational Leadership*, 66(5).

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## EL Online

To read about another aspect of formative assessment, read the online article, “What Conversations Can Capture” by Tonya Ward Singer and Jeff Zwiers, available at [www.ascd.org/el0416singer](http://www.ascd.org/el0416singer)



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# *The* POWER *of* PEERS



*Raise the bar on the quality of student learning by drawing on students' intrinsic interest in one another's work.*

**Rob Traver**

**E**ven the best teachers ask themselves how they can motivate students to do well. One potential answer: Engage students in looking at—and learning from—one another's work. In classrooms that adopt these practices, students examine the efforts of their peers, discuss what is good and what needs to be done, and set out to improve their work.

What follows is a look into three such classrooms. In one case, students

take part in a public critique of their classmates' work. In the two others, students respond to anonymous efforts in math and writing, but what's important is that the work has been done by students just like them, not drawn from arbitrary examples in a textbook. The point in common: When we capitalize on students' natural interest in their peers' work, we can foster motivated classrooms where they reach for—and meet—high standards.





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### A First Draft

“Who has the red-flag pencil?” an instructor asks in an engineering class. “Please offer the team a warm, positive comment about their presentation slide” (see fig. 1, p. 70).

A student raises a pencil topped with a red flag and says, “I really like the color scheme. The flame colors go well with the topic of the project, Structure Fire Gas Emissions.”

The instructor continues. “Okay, good. Who has the blue-flag pencil?”

Do you have a cool comment—a suggestion or question—that might help improve the slide?”

The student with the blue-flag pencil chimes in. “Yes, the colors are good, but the slide only has text. If it had some pictures, charts, or something graphic, I think it might be better.”

What is going on here? Students in the class are preparing for project presentations. Working in teams of four, they have one slide and four minutes to inform the audience about their project. The rest of the students critique the slide and presentation.

After the warm compliment and cool suggestion are on the floor, the teacher opens the discussion to the whole class, first asking for more compliments.

“The horizontal display of the three parts of the proposal work really well,” says one student.

Another adds, “Well, it’s just a little thing, but the black spots for the bullet numbers look like coals, like you get from a fire. That’s cool.”

The audience also offers feedback on the delivery of the four-minute presentation, noting where the team members made good transitions between different parts of the talk and when someone was really articulate about one of the points.

Afterward, the teacher shifts to cool suggestions, reminding students to “be critical, but be nice.” Several hands go up.

“I’m not sure, but I thought the team said something about a fifth kind of calculation,” one student says. “Your slide says there are four. I’m confused.”

“I don’t know what the SHPI logo means at the bottom of the slide. Is that your sponsor? Maybe you need to say more about them, or leave out the logo,” notes a second student.

The class also offers critiques on the delivery. Among them: “Kristina needs to talk a little louder” and “The introduction was too long and so everyone else didn’t have enough time.”

Hearing the comment about speaking louder, Kristina looks discouraged. The look on her face conveys that this has long been a struggle for her. But overall the presenting team has been trained to listen and take in the comments. The

**When we capitalize on students’ natural interest in their peers’ work, we can foster motivated classrooms where students reach for—and meet—high standards.**

students stand quietly. One person, with a tablet in hand, notes the class’s feedback. There is only so much time in the class, and the point of the exercise is to collect as much feedback as possible. Later, the team can decide what they want to use, modify, or reject.

At the end of about six minutes of feedback, the team retires to a round of applause. They take their seats before the next team make its presentation.

### Practice and Repeat

The teams present their talks again one week later. It’s evident that they’ve worked on their slides and delivery;

FIGURE 1. First Draft of Presentation Slide



you can even overhear teammates checking with one another about timing, volume, and emphasis. Review and practice have strengthened their presentations, and they're looking forward to showing their classmates what they've accomplished.

It's the Structure Fire Gas Emissions team's turn again. The new slide flashes on the screen, and there are audible "oohs" and "aahs" from the class. The re-designed slide is striking (see fig. 2). With the slide displayed, the team delivers its presentation again.

The feedback routine is the same. First, the teacher asks for the red-flag feedback (the building graphic clarifies the purpose of the project, says a student) and the blue-flag suggestion (the black arrow is too big and out of scale with the buildings and text boxes, says another).

Then the class offers more warm comments, which include "The addition of the aggregate box now makes the five models easier to understand" and "I could hear everyone this time."

Students offer several thoughtful cool suggestions. Among them, one student says, "Last time we thought that maybe the sponsor logo was a problem, but now that it is gone, it seems like it should be put back. It's important that we acknowledge our sponsors and explain why we're doing our projects. I know the logo color scheme clashes with the fire colors, but I still think it should be there."

### The Payoff

The following week, the teams make their final presentations for an audience of faculty, family, and friends. The students are professionally dressed, confident, and ready to go. After the six teams give their presentations and answer follow-up questions, the room bursts into applause. It's not

gratuitous. The presentations are professional grade.

On the way out of the room, a mother turns to the instructor. "I've never seen my daughter look so confident," she says. "I hid in the back of the room—she told me to—but I could [still] hear her. She's never been able to speak publically like that before. I'm so proud."

Students' reflections about the peer-review process reveal similar insights and revelations. "It works really well when we have to look at one another's presentations and make both positive and negative comments," one student writes. "It helps you learn how to give constructive feedback—and accept it."

"It's the revisions that work so well," another class member says. "Lots of teachers ask for presentations, but you only get to try once, so you never make it better. Here, we got to practice."

A third student offers: "After I made a comment about another team's presentation, I got to thinking I should probably do that [in my presentation], too."

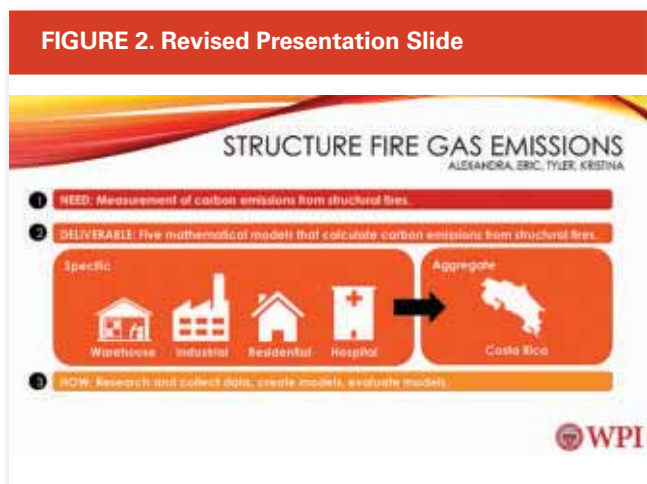
### Student Buy-In

The opportunity to look at and provide feedback about other students' work shouldn't be reserved for upper-level students. Elementary students can learn from the process as well.

In her classroom, 3rd grade teacher Kris displays two answers—shown in Figures 3 and 4—to a math problem. The responses, she tells the class, come from two 3rd graders who took the previous year's high-stakes statewide exam.

Kris highlights the prompt at the top of the box, tells students to look at the problems for a minute or two, and then asks, "What do you notice?"

FIGURE 2. Revised Presentation Slide





**FIGURE 3. 3rd Grade Math Response (Score 2 out of 2)**

Two fractions are shown below

$$\frac{2}{8} \quad \frac{2}{3}$$

A. Write a number sentence to compare

$$\frac{2}{8} \text{ and } \frac{2}{3}$$

Use  $<$ ,  $>$ , or  $=$  in your number sentence.

$$\frac{2}{8} > \frac{2}{3}$$

B. Draw a model that shows your number sentence is correct.



Student mathematics examples courtesy of the Massachusetts Department of Education, MCAS Mathematics, Grade 3, 2014.

Some students pick up on small details. One member of the class says that the questions in the first answer are circled. Another points out that the number sentences are formatted differently in the two responses—one says  $2/8 < 2/3$  and the other says  $2/3 > 2/8$ . When Kris asks the student if he thinks that matters, he puzzles for a moment before realizing that both are acceptable as long as the inequality symbols are positioned correctly.

Next, the class dives into the model drawing, which includes this exchange:

**“The kids always watch one another, so an example from them uses their natural desire to compare with everybody else.”**

STUDENT: The pictures in the first answer are better.

KRIS: How is that?

STUDENT: Well, the pieces of the pies are the same size.

KRIS: Really? They look different to me.

STUDENT: No, in the pie with three pieces in the first answer, the three pieces are the same size. And the pie with eight pieces has the same sizes.

KRIS: And that’s not the case for the second student?

STUDENT: No, the pieces [in each] of the pies are different sizes.

KRIS: Oh, I see what you mean, but why is that important?

STUDENT: Because it doesn’t [correctly] show the sizes of the fractions.

KRIS: Right. The better drawing shows that the pieces in each pie must be the same size so you can see the fractions clearly.

Kris moves the lesson along by asking students to write some rules for themselves that will help them answer questions like the one on display.

Her students offer multiple ideas: Circle the important parts of the question; make the parts of the pie equal; draw carefully; and make sure the inequality symbol points in the correct direction.

Afterward, Kris presents the class with a similar math question—one that calls for them to compare two

**FIGURE 4. 3rd Grade Math Response (Score 1 out of 2)**

Two fractions are shown below

$$\frac{2}{8} \quad \frac{2}{3}$$

A. Write a number sentence to compare

$$\frac{2}{8} \text{ and } \frac{2}{3}$$

Use  $<$ ,  $>$ , or  $=$  in your number sentence.

$$\frac{2}{3} > \frac{2}{8}$$

B. Draw a model that shows your number sentence is correct.



Student mathematics examples courtesy of the Massachusetts Department of Education, MCAS Mathematics, Grade 3, 2014.

fractions in a mathematical sentence and to complete a pie chart model. She uses the time to review the concepts behind fraction size, simple math sentences, and graph models of fractions. Kris tells the students that when they understand math this well, it will be easy to get the full score for this test item, just like in the first student’s work they studied.

Later in the day, Kris talks with another teacher about her lesson.

“Sounds like what we all do,” says her colleague. “We show the kids

an example, point out the important parts, and let them try it on their own.”

Kris agrees, but argues that there is a difference.

When I start by showing the students what other students have done, it's intrinsically more interesting than just an example from the book or worksheet. The kids always watch one another, so an example from them uses their natural desire to compare with everybody else. Also, because the answer comes from an exam setting, it's real. People are always interested about other people in “high-risk” situations. I don't think kids are different. And, well, I think letting them try a similar kind of question right away gets them to follow the model.

### Revise and Rewrite

The same concept holds true in writing. Students who look at the writing of their peers learn a lot about what differentiates strong writing from weak writing. And why shouldn't they? Professional writers attend workshops where they listen to others' narratives, read examples, write, and learn from the instructor and peer critique.

With young students, it is especially helpful to provide a strong example and a weak example side by side. This makes it easier for the students to identify differences.

For example, Kay, a 4th grade teacher, posts two pieces of writing for her students to study (see figs. 5 and 6 online at [www.ascd.org/el0416traver](http://www.ascd.org/el0416traver)). She tells her class that other 4th graders wrote these stories for an important test. Here is the prompt:

*You are finally old enough to babysit, and your first job is this afternoon! You will be spending the entire afternoon with a one-year-old. When you open the door you realize that instead of watching a one-year-old child, you will be watching a one-year-old elephant! Write a story about spending your afternoon with a baby*

## It's especially helpful to provide a strong example and a weak example side by side.

*elephant. Give enough details to show readers what your afternoon is like baby-sitting the elephant.*

Kay reads the two compositions aloud. At the end she asks, “Well, what do you think? The stories are clearly different, but how?”

One student says that the second sample is better. “There [are] more things in the story, like what happens,” he says. Kay prompts the student to say more, ultimately eliciting that there are more details and that the author uses dialogue to help tell the story.

“It's more interesting,” adds another student. “Sometimes you don't know what is happening, then you learn it.”

Kay asks for an example.

“When she screams, you wonder, what's wrong? Then she tells you: it's an elephant,” the student responds.

“Very good,” affirms Kay. “Authors help us like their stories by making us wonder what is going to happen next.”

And then there's the realist in the group. “I don't like the stories,” counters one boy. When Kay asks why, he says matter-of-factly, “Nobody babysits an elephant.”

But in Kay's mind, there's a point to be made about literature. “You're right in a way. When we read a story, it's important that we believe it's real. Think about fantasy or space travel stories. Well-written stories make us believe, even if they're pretend. But if pretend stories are badly written, they bother us. This story bothers at least one of us.”

Kay then turns the class's attention to the first story, asking students to improve it. She instructs students to add dialogue and adjectives—perhaps describing the house in which the elephant lives.

Kay likes the idea of asking the students to improve an existing story that was started by someone else. That way, the students aren't invested in telling “their story,” an investment that is often hard to set aside when changes must be made. With someone else's story, it's easier to see what might be done, and the students love the idea of helping another student writer, even if they don't know who the student is. Later on, it's easier to show students how to rewrite and do similar editing on their own compositions.

### The Challenge of Good Work

Teachers like Kay know that there are more effective and less effective ways to teach writing. She believes that showing students other students' work, critiquing it, and trying to make improvements is powerful because it aligns with the way that most people learn.

Students are naturally inclined to watch their peers, to make suggestions and support them, to avoid mistakes, to copy what works and modify what doesn't, and to learn from one another. By building on the authentic desire to do well, teachers tap into a deep-seated motivation and elicit remarkably well-formed, high-quality ideas. It makes the challenge and achievement of good work much more manageable and attainable for kids—and a whole lot more enjoyable to teach. ■

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# ART *in Action*

*A middle-school art project invites students to examine how their work affects others.*

## **Joanne Kelleher**

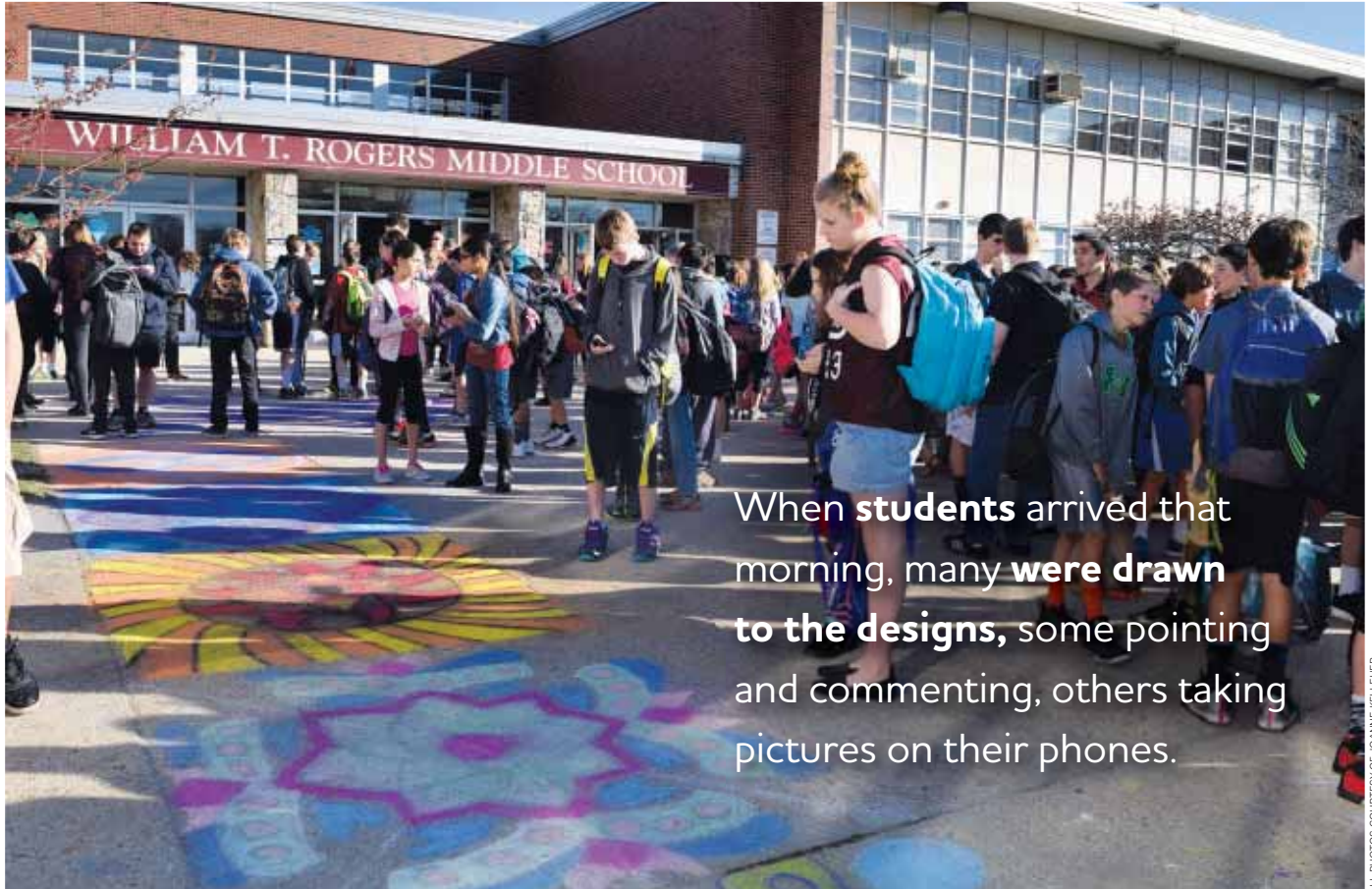
One day last spring, art teachers Victoria Sciotto and Patricia Daly gathered their 7th and 8th grade accelerated art students in our school's cafeteria. The students had been working on plans for chalk art mandalas for several weeks, and in a few days they were going to install their projects on the walkway leading to the school's main entrance.

As assistant principal, I had watched the growth of this project with interest. Now I asked the students, "Have you thought about the effect your art will have on the people who see it?" The students admitted that they had not given it much thought. They had been too busy thinking about their designs, the color palettes, and the due dates for each stage of the project.

As aware as middle schoolers can be of their peers' reactions, we were surprised that they had not thought about the audience for their work. Their teachers and I realized that this project had great potential to help students develop an appreciation for the value of their work—for its capacity to contribute to our school community and as an avenue for personal fulfillment. Further, the mandala project offered us the opportunity to engage the students in the kind of collaborative, active learning experience that is characteristic of a successful middle school education.







When **students** arrived that morning, many **were drawn to the designs**, some pointing and commenting, others taking pictures on their phones.

ALL PHOTOS COURTESY OF JOANNE KELLEHER

### The Project's Beginnings

About one year earlier, Mrs. Daly had stopped by my office to describe a project she and Mrs. Sciotto had in mind. She had read an article about Via Colori, a street-painting festival during which participants purchase a square on the ground to display their art; the artwork is washed away after the festival. The art teachers' idea was to have their students each decorate a square on our front walkway. Although our art department regularly displays student work in the showcases in our hallways, this project would allow the students to share their art with a wider audience and teach students that art doesn't have to be permanent.

Mrs. Sciotto and Mrs. Daly chose to have their students create mandalas in the squares. Mandalas are symbolic geometric patterns with the design emanating from a center point. The basic form of most mandalas is a circle divided into four symmetrical sections, a structure representative of patterns found in nature, including the structure of our cells (Art Therapy, 2015). Logistically speaking, the bright, bold designs would be eye-catching. Plus, using chalk as the medium would enable quick cleanup as the designs would wash away with the first rainfall.

To check the viability of the project, Mrs. Sciotto and Mrs. Daly created their own mandalas on the walkway.

The reactions of staff members who noticed the colorful designs—and my own growing excitement about the project—got me thinking about the project's potential for an action research project. If a few passersby were enthusiastic about the artwork, wouldn't others be, too? Would there be a way to measure the reaction to the students' work?

As we asked ourselves these questions, we began to imagine that adding an action research component to this project could provide students with a new perspective about their artwork, its potential impact on others, and an opportunity to be reflective.

When the teachers launched the project, they introduced mandalas to

the students, focusing on the significance and symmetry of the designs. To get a sense of the impermanence of their project, the students watched a video of monks creating a sand mandala—and then destroying it by blowing it away as soon as they were finished ([www.onbeing.org/blog/building-mandala-buddha-compassion/3945](http://www.onbeing.org/blog/building-mandala-buddha-compassion/3945)).

The students drafted their creations on paper and later created chalk designs on squares of gray paper to simulate the cement background. Soon our artists were ready for the installation.

### The Research Component

When we met with the students in the cafeteria shortly before the installation, we wanted to elicit their ideas about what might happen after the mandalas were complete. Before the meeting, the students had read “Why We Love—and Need—Public Art” (Laneri, 2010). They worked in small groups during our meeting to find passages in the text that described the impact of public art, including art’s ability to “build morale” and “lift up humanity and challenge the individual who encounters it to think differently about the world.” As the students began to realize that their project could have a ripple effect beyond their personal experiences, we suggested that this project was an opportunity for them to engage in action research.

Working with Sager’s (2000) definition of action research—“a disciplined process of inquiry conducted by and for those taking the action”—we explained that looking at the project through the lens of researcher could expand students’ understanding of why and how they create art. We outlined the steps of an action research project: select a focus, clarify theories,

## The mandala installation provided a new avenue for not only looking at—but also reacting to—student work.

identify research questions, collect data, analyze data, report results, and take informed action.

Because we already had a focus and had learned about theories of public art from the article, we asked students to develop a research question about the impact of the mandala project. The students decided that they wanted to know whether the mandalas would make people happy; they hypothesized that they would.

Next, students brainstormed how we might collect data to measure happiness. It’s not an easy task, but the students came up with several ideas:

### EL Online

For more ideas on how visual art can engage students in learning and promote focused attention, see the online article “More than Pretty Pictures” by Patricia Crain de Galarce and Kathleen Kennedy, available at [www.ascd.org/e10416galarce](http://www.ascd.org/e10416galarce). For strategies that connect math tasks to children’s literature, see the online article “How Hungry Was the Caterpillar?” by Allison Hintz and Antony T. Smith, available at [www.ascd.org/e10416hintz](http://www.ascd.org/e10416hintz)

observe and/or photograph students, take a survey, and ask others how the art made them feel. We explained the difference between qualitative and quantitative data and agreed that both types would be helpful for our research.

Before our meeting, we received a donation of a Happy-or-Not machine for the purpose of capturing reactions to the art. These machines display a question and ask respondents to choose from four choices—ranging from a green happy face to a red frown. As simple as it may sound, businesses have set up these machines to collect data about customers’ feelings at the point of experience, including travelers passing through security lines at international airports and patients receiving care at medical facilities.

Our students decided that we would place the machine in the main lobby with the question “How do you feel today?” so their peers could register their feelings immediately after seeing the art. We would introduce the machine on Monday—two days before the installation—to get a baseline reading, and then compare the baseline with data from the day the art was installed. We talked about variables that might affect our results, such as how certain days of the week could influence students’ moods.

### Debut of the Mandalas

On the morning of the installation, the students arrived at 8 a.m. and worked for most of the day. When they finished, the students took a good long look at the decorated squares and reflected on their work. Then, with the help of the custodians, we covered the designs with plastic so they would not be seen until the big reveal the following morning.

At our school, the students gather on the front walkway in the morning before we admit them into the building, which created the perfect scenario for viewing the mandalas. Our principal, Lauren Moreno, arranged to have partition ropes set up to prevent people from walking on the art, giving the walkway the feel of an art gallery. When students arrived that morning, many were drawn to the designs, some pointing and commenting, others taking pictures on their phones. Upon entering the building, students hit the button on the Happy-or-Not machine to indicate how they were feeling, just as they had done the previous two days. Would viewing the artwork result in a spike in “very good” responses? According to 6th grader Thomas, of course it would. “How could you see that artwork and not hit ‘very good’!” he enthused.

### Analyzing the Data

A few days later, we reconvened to take a look at the data. First, we shared qualitative data that we had collected by speaking with members of the school community. One of the teacher aides said, “I got goosebumps and had tears in my eyes. Twice it happened!” Students said that reactions from their classmates weren’t as expressive but were overwhelmingly positive, including comments like “gorgeous” and “really cool to look at.”

The feedback carried over to social media. Students informed me that they had seen the mandalas on Instagram, Facebook, and Twitter. For better or worse, our students live in the world of social media. That this project crossed over from the realm of school to Instagram told us that it was relevant to our middle schoolers. Mrs. Daly and Mrs. Sciotto also set up a Padlet (<http://padlet.com/sciottov/>

**The basic form of most mandalas is a circle divided into four symmetrical sections, a structure representative of patterns found in nature, including the structure of our cells.**

chalktalk) where they posted the students’ work and invited members of the school community to post their feedback. The comments were unanimously complimentary.

Additionally, we received daily data reports from the Happy-or-Not machine and shared Monday and Wednesday’s results with the students (see Figure 1 online at [www.ascd.org/el0416kelleher](http://www.ascd.org/el0416kelleher)). The students noticed that although there had been fewer responses on Wednesday, a larger percentage of people were either happy or very happy and a smaller percentage of people were feeling bad or very bad.

Students noted a flaw in the data collection process, reporting that some students hit the frown face repeatedly or all of the buttons several times in succession. The students suggested that more teacher oversight would produce more reliable results. But on balance, taking into account both the qualitative and quantitative data, the students concluded that they had answered their research question—their project did indeed make people happy.

### Taking Action

The final step of the action research process is to take informed action. We hoped that when our students saw themselves as valuable contributors to their community, they would feel empowered and discover other opportunities to fulfill this role. “This project definitely changed the way I

think about myself as an artist,” said Cathryn, a 7th grader. “I realized that if people enjoyed viewing my art and I enjoyed making it, then I should keep doing it.”

Overall, we felt that this art-meets-action-research project was a success. It served as an example of the positive effects of active learning and collaboration between teachers and students. The mandala installation also provided a new avenue for not only looking at—but also reacting to—student work. And in the tradition of public art projects, it caused us to stop and look around, bolstered the morale of our community, and if only for a few short weeks, improved the quality of our lives. ■

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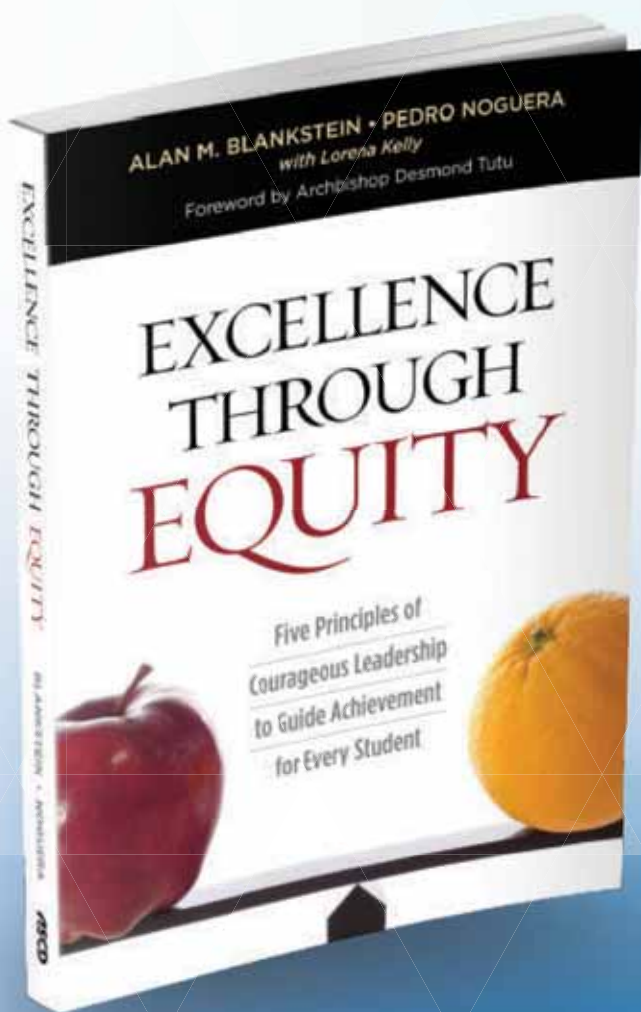
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Bryan Goodwin with Heather Hein

## Looking at Student Work Yields Insights

**Y**ears ago when I was a graduate student teaching college composition, my supervising professor presented the group of us teaching composition with two student papers. One was neatly typed, grammatically flawless, and structurally sound. Its five tidy paragraphs all began with topic sentences dutifully followed by supporting sentences.

The second paper was another matter. It had been scrawled into, and ripped from, a spiral notepad. Some words were hastily crossed out, others misspelled. Yet the writer's observations of late-night goings-on at a local burger joint left us chuckling. He wrote with a voice, including indelible turns of phrase like, "People began chucking the nasty burgers back at the workers." His thesis statement—what makes this fast food place special isn't the food but the unexpected entertainment that comes free with every meal—was clear and supported. In contrast, the first paper, was inert. It consumed five paragraphs saying almost nothing.

"How would you grade these two papers?" our professor asked. Thus began a productive dialogue—one that forever shaped my own make-a-point (but also revise-and-proofread) approach to writing instruction.

That's the promise of teachers looking at student work together. Focusing teacher dialogue on real artifacts can surface tacit differences in our expectations and teaching practices. So what does research say about using this approach—sometimes called the *work sample method*—for teacher professional development?

### Snorkeling or Scuba Diving?

To date, few large-scale, rigorous studies have been conducted on this method, so we must

piece together qualitative research to get a handle on its benefits. In 2002, a team of researchers at the University of California-Berkeley (Little, Gearhart, Curry, & Kafka, 2002) presented a conference paper that reviewed five different work sample method approaches and concluded there was "emerging evidence" to support the approach.

That's hardly a ringing endorsement. At issue seems to be exactly what teachers do while looking

at student work: Do they skim the surface or dive deep into what the work shows students—and possibly *teachers*—are thinking about during the learning process?

Three conditions need to be in place for teachers to take that dive:

- *Be tough on practices, not people.* Analyzing student work, notes teacher coach

and author Elisa MacDonald (2011), requires teachers to trust, and be vulnerable with, one another. "Teachers must be willing to expose their struggles and failures with their colleagues," she writes. And "colleagues must be willing to tell the truth, or teams will go through the motions . . . but never see results" (p. 45).

- *Focus on student thinking.* A five-year study of professional learning communities (Deuel, Nelson, Slavitt, & Kennedy, 2009) found that many collaborative conversations defaulted to an approach of proving that students had learned and teachers had done their jobs. In contrast, effective collaborative inquiry moved beyond whether students "got it" and asked instead what students were *thinking* about. Doing so surfaced unspoken assumptions.

- *Encourage self-reflection.* The first step to changing any behavior is recognizing the need to change. There's little benefit to analyzing student work if teachers don't also step back and reflect on their *own* work and assumptions.

Analyzing student work requires teachers to trust one another.



## Putting It All Together


As with many endeavors, the key appears to be striking all these notes in unison so that like a chord, they work in harmony. Recently, a study (Dempsey, Beesley, Fazendeiro Clark, & Tweed, 2015) of a work sample method developed by McREL researchers attempted to do exactly that. The results provide some of the best evidence to date that when these conditions are all met, teacher self-reflection and practice and, ultimately, student achievement can increase.

The intervention was designed to address middle school students' waning interest and persistence in mathematics. It began with intensive workshops to help teachers better understand the concepts of student growth mindset and persistence—and the formative assessment practices needed to foster them. In facilitated sessions, small groups of teachers discussed examples of lesson goals and success criteria, and student work that met (or didn't meet) the goals. They shared their own student work samples, discussing their intended goals for each lesson, how well student work met those goals, and what feedback they'd offered along the way. Teachers also reflected on their own progress toward developing expertise and provided one another with critical-friend feedback.

Before and after the study, outside reviewers evaluated teachers' work samples, including the quality and rigor of their learning goals and assessment criteria, the extent to which lessons and student tasks aligned with learning goals, the quality of feedback to students, and the extent to which students engaged in self- or peer assessment. Throughout the study, teachers improved significantly in all these factors. In focus group sessions, teachers reported greater student engagement and persistence on complex math tasks.

Despite these changes, student achievement on the state's math assessment didn't improve at significantly higher rates than that of students outside the study. However, the small sample size (47 teachers) created a high bar for demonstrating statistical significance. Moreover, the state test didn't measure the kinds of complex learning these teachers had been attempting to develop.

This last point is important. Thinking back on my own experience, there would have been little benefit if my colleagues and I had collectively parsed student work for rudimentary (and easily testable) skills like grammar. The real benefit of talking through student work samples was that it helped me reflect upon and change my own paradigm. Writing instructors have a natural tendency to overweight the easy things to grade (and teach), like grammar, spelling, and structure. Colleagues helped me see it was more important to teach complex skills like developing ideas and writing with voice.

The power of collaboratively reviewing student work lies in diving deeply into vexing teaching challenges. And, as any scuba instructor will tell you, always dive with a buddy. 

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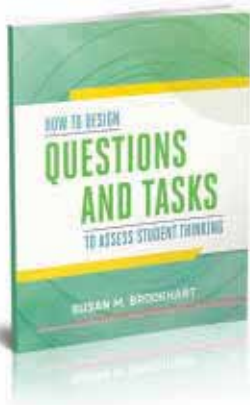
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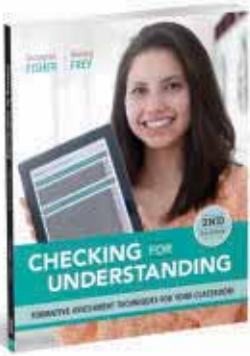
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## SHOW & TELL

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# Has Our Instruction Made a Difference?

**H**ow do we know whether our instruction has made any difference? Even when we employ a range of formative assessments and use the assessment results to guide our instructional decisions, we haven't necessarily answered the question of whether our teaching increased students' learning, and by how much.

With a group of our colleagues, we set out to assess our impact. We wanted to see whether a statistical tool—effect size—could give us a more accurate picture of how much student learning had occurred as a result of our instruction.

### A Starting Point

Determining impact requires baseline information. So after studying the development of quality assessments and sharing ideas with one another about ways to check for understanding, our team created pre-assessments for selected instructional units. For instance, for a unit that covered plagiarizing, summarizing, paraphrasing, and quoting sources, the pre-assessment included multiple-choice questions like the following:

*Plagiarism can best be defined as:*

- A. *paraphrasing and summarizing the work of others in your own work*
- B. *capturing or trapping something*
- C. *presenting the words and ideas of others as your own*
- D. *quoting and using citations when writing essays.*

It also included open-ended questions like this:

*Marla and her friends like the poems of Shel Silverstein, so she copied a bunch of the poems using the school*

*photocopier, stapled them together, and made plans to sell the booklet to anyone who wanted it. Is this fair use? Why or why not?*

### Measuring Growth

Now that we knew where students currently stood in their knowledge of the subject matter, we were ready to teach the unit and assess their growth. We theorized that using a specific statistical tool, effect size, would give us a quantifiable measure for that growth.

In his research on the relative degree to which different instructional approaches influence learning, John Hattie (2009) demonstrated that an effect size of .40 was about equal to one year of growth for a year of schooling.<sup>1</sup> Ideally, teachers produce more than

a year's growth each year for their students. Hattie also demonstrated that teachers could use the same statistical tool to estimate the effect of their own classroom instruction on student learning.

We decided to give it a try. We administered a post-test on the plagiarizing unit, using differently worded but corresponding items to ensure that our pre-test and post-test were aligned. We used the effect size formula to determine impact. Effect size equals

$$\frac{\text{Average (post-assessment)} - \text{Average (pre-assessment)}}{\text{Average standard deviation (SD)}}$$

On an Excel spreadsheet, we listed each student's pre-assessment and post-assessment scores. We had the program calculate the averages and the standard deviations. We averaged the standard

Teachers need accurate evidence of how much students have grown.



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deviation for the pre- and post-assessments to serve as our denominator. In a matter of minutes, we had an effect size of .77. It would seem that students had made sufficient progress to consider the plagiarism unit a success.

Before moving on, however, we wanted to know whether there were any gaps in students' understanding that we should address. Our item analysis revealed that many students missed two specific items:

1. *If you quote your friend in an interview, you don't have to cite him/her or use quotation marks. True or false?*
  - A. illegal and may result in being fined
  - B. unethical
  - C. unauthorized
  - D. no big deal
2. *Downloading music from the Internet without paying for it is*
  - A. illegal and may result in being fined
  - B. unethical
  - C. unauthorized
  - D. no big deal

For the first question, we talked about why students might not understand the need to cite or quote the words of a specific individual with appropriate attribution. We developed a quick set of examples to clarify this concept for our students. For the second question, we realized that the answer we wanted, A, was conflated with answers B and C. Downloading music from the Internet without paying is illegal, but it's also unethical and unauthorized. We realized that the question was unfair, even though we had tried to emphasize the illegal nature of the action in our instruction. We deleted this question from the analysis, and the effect size increased to .89.

### Targeted Help for Individual Students

The same tool can be used to determine individual student effect sizes. Instead of the averages, you use individual student scores and still divide by the average standard deviation, thus quickly determining which students still need to develop their understanding. Of the more than 150 students who participated in the plagiarism unit of study, 19 had effect

sizes that were below our desired minimum value of .40.

As a team, we made plans to meet with these students to review their assessments and talk about each incorrect answer. We asked each student to tell us about his or her thinking so we could address misunderstandings. For example, in response to the following question, Horacio had chosen answer D:

*Summarizing is*

- A. *using the exact words of an author, copied directly from a source, word for word*
- B. *putting the main idea(s) of one or several writers into your own words, including only the main point(s)*
- C. *asking for help from a reliable source*
- D. *rephrasing the words of an author, putting his/her thoughts in your own words.*

In the discussion with Horacio, we found that he understood that using exact words required a citation, but was confused about the difference between summarizing and paraphrasing. This clarification of his thinking provided an opportunity for additional instruction.

### Mid-Course Corrections


Determining impact does not have to wait until the end of a lesson. When teachers use multiple versions of an assessment—or a tool that identifies different levels of performance, such as a rubric—teachers can determine impact during the unit of study.

In the video that accompanies this column, 5th grade writing teacher Lisa Forehand teaches her students about peer feedback and critique to strengthen their writing. Earlier, she developed a rubric describing the skills needed to provide robust peer critiques. As a pre-assessment, she observed her students providing feedback and scored them according to the rubric. She then taught the elements of providing critiques over several lessons, and observed students providing critiques again to see whether their skills had improved.

Ms. Forehand was not satisfied with the results of the instruction. She observed that students were more focused on being nice than on looking closely at one another's work. The effect score she calculated confirmed her findings.

In response to this information, Ms. Forehand revisited the areas that required additional focus, especially making sure that feedback is specific. She asked students to note the difference between giving compliments and providing actionable suggestions. As students worked in pairs, she again made observations using the rubric, and later, she calculated their scores again to confirm that the additional instruction had had an impact. The following day, she remarked, "I've always collected student observation information, but analyzing the data this way gives me more specific, timely feedback about the progress I'm making with them. I can teach much more responsively."

### A Tool for Making Better Decisions

Comparing pre- and post-assessment results, teachers can estimate the impact of an instructional unit and identify students still in need of instruction. By looking together at the results, collaborative teams can focus their conversation on what they can do to increase their effect on student learning. And they can make better decisions if they have accurate evidence of how much students have grown. 

<sup>1</sup>Hattie, J. M. (2009). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. New York: Routledge.

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## Provide Feedback As They Write

**A**sk teachers what their least favorite aspect of their job is, and most will groan, “grading.” After a long day at school, teachers spend significant amounts of time in the evenings and on weekends grading students’ work—especially writing assignments. Keeping up with grading can be exhausting, and it robs us of the time and energy needed to design creative lessons and meaningful assessments.

As a younger teacher, I spent an average of 7–10 minutes on each student essay, correcting mechanical errors, identifying places where stronger evidence was needed, and pointing out underdeveloped analyses. Then I’d fill out a detailed rubric to arrive at a final grade. Yet that investment wasn’t rewarding because I was commenting on completed assignments, and students rarely revised their work once they received a grade.

### Pulling the Process into the Classroom

Three years ago, I had an epiphany about my approach to providing feedback on my students’ writing. Students were just about to start an essay analyzing plot elements that led to the tragic ending in Shakespeare’s play *Othello*. Because the language and plot are complex, this was a challenging assignment. I knew my students would need support during the writing process.

I had the class time to provide that support because I flip my writing instruction. Instead of standing in front of the class and explaining how to write a thesis statement or format a paragraph, I record and publish videos on the different steps of writing an essay. Students watch those videos at home where they can control the pace of their learning. They can pause the video, rewind it, or watch it a few times if they need to review an

explanation. Students can then apply what they’ve learned in the video by writing in class, where they have the support of the subject-area expert—me—and their peers when they put pen to paper or fingers to keys.

I first planned time in class for students to crowdsource textual evidence that they could use in their essays. Students worked in small groups, digging through the play to find evidence that showed how elements of the plot led to the ending. As students worked to identify strong quotes from

the play, I invited them to add their quotes to a shared Padlet Wall—a virtual note board. This made the burden of finding strong textual evidence a shared task. As they worked in class, I circulated, answering questions and providing individual support to students who were struggling.

I know many teachers might frown on students sharing evidence in a collab-

orative prewriting session, but I disagree. The best textual evidence tends to rise to the top. Students learn from one another in these moments. It was fun to hear them discuss particular quotes and bounce around interpretations as they worked. Students learned more from having those conversations about the language in the play, in my opinion, than they would have learned from hunting down textual evidence on their own.

### Synchronous Editing

In addition to this collaborative prewriting session, I also reserved the computer lab three days in a row and decided to experiment with editing students’ essays as they worked on them. Using Google documents, I was able to jump in and out of students’ essays throughout the writing process. This created a level of transparency that I never

Assigning an essay to be completed at home and then graded in isolation is a missed opportunity.



had when students were composing on paper or Word documents.

The first day we went into the computer lab, I told my students that I was going to stay seated the entire 90-minute period with the goal of commenting on every single document. I explained that if I walked around the room answering questions, I wouldn't be able to provide everyone with the feedback they deserved. If they got stuck or had a question that couldn't wait, I invited them to send me a message through Gmail chat.

The 90-minute block passed in a blur of editing. It was incredible to provide feedback as my students worked. For instance, some students were missing a key element in their thesis statements or failed to format their paragraphs properly, so I copied and pasted links to specific videos I had recorded on these topics and asked them to review the videos and correct the issues. During our synchronous editing session, I also pointed out grammatical errors, misuse of informal language, and homophone mistakes. One student kept typing "loose" when she meant "lose," so I made a note on her document explaining the difference and encouraged her to use the "find and replace" function under her editing tools.

As I made comments on their writing, I'd see their cursors pause and jump to the spot where I had made the suggestion, and then students would correct the error or make the necessary edit. The entire experience was rewarding on a number of levels: It eliminated the lag time that's so common in the feedback cycle, created total transparency, and made editing

students' papers feel more like a conversation than an evaluation.

### **Value the Process, Not the Product**

As I walked away from that first session of synchronous editing, exhausted but satisfied with both my students' effort and my own, it hit me. My 9th and 10th grade students are still learning *how* to write. Most students enter my class without a strong foundation in writing. They are not

How could it have taken me 12 years to realize that I needed to put 90 percent of my effort and time into the process and 10 percent into the product?

yet strong enough writers to tackle the complex essay prompts I present without serious support. The time I spend helping my students edit and refine their writing *as they write* is exponentially more valuable for them than the final comments I leave on their essays.

How could it have taken me 12 years to realize that I needed to put 90 percent of my effort and time into the process and 10 percent into the product? It seems so obvious now. In part, I think my failure to make this connection was really the result of not having the technology that I needed to truly work with students in a collaborative way. It was hard to see the process and identify areas of strength and weakness before Google Apps gave me access to my students' work at

all stages of the writing process.

I realized that a writing assignment shouldn't be used as simply an assessment tool. Assigning an essay to be completed at home and then graded in isolation is a missed opportunity. The students miss out on valuable feedback and support as they write, and the teacher collects enormous stacks of paper that must be graded outside the school day. This old model is frustrating and exhausting for everyone.

Why not move writing, and practice of all kinds, back into the classroom? It makes more sense to spend our time and energy providing feedback as students work, instead of waiting until the end products are collected to spend hours editing them. We are fortunate enough to teach in a time when technology is making it easier than ever to collaborate on documents and provide instant feedback, so we can embrace and prioritize the process. **EL**

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Thomas R. Hoerr

# Why You Need a Diversity Champion

**W**ho's the diversity champion at your school? This is the person who makes sure that issues of diversity are factored into school strategies and part of everyone's professional growth plan. The diversity champion is often the school's conscience for diversity, the one who prods staff members to be vigilant about providing respect, appreciation, and inclusion to everyone. Do you wear this mantle? Is it formally assigned to someone, or is it simply understood that diversity is a priority at your school?

If you assume that everyone at your school realizes diversity is important, so it doesn't need a formal champion—you're wrong. It's precisely because affirming all the aspects of each child's identity is so important to growth and development that diversity needs a point person. Schoolwide efforts to embrace diversity must be at the forefront of someone's consciousness; some person needs to be accountable for scrutinizing plans, observing actions, and checking communications to be sure an appreciation for this concept is integral to everything that happens at the school.

## When Diversity Loses its Meaning

The term *diversity* has become part of our politically correct admin-speak. It's mentioned in our literature, noted on bulletin boards, and featured in hiring advertisements. But too often, our actions don't follow our pronouncements and our visions are just words. Anna Holmes recently made the case in the *New York Times* that this word has lost its meaning:

How does a word become so muddled that it loses much of its meaning? How does it go from communicating something idealistic to something cynical and suspect? If that word is "diversity," the answer is: through a combination of overuse, imprecision,

inertia, and self-serving intentions. . . . It's almost as if cheerfully and frequently uttering the word "diversity" is the equivalent of doing the work of actually making it a reality. (pp. 21-22)<sup>1</sup>

We value what we measure, and those things that aren't measured—often including diversity—aren't given much attention. That's somewhat understandable, but it's also a mistake because issues that stem from student diversity are too important to ignore.

Maslow's hierarchy of needs shows us that self-actualization—learning and growing—is at the highest level, but before we can begin to work toward that goal, we need to have our physiological needs of food and sleep met, we need to be safe, and we need to feel

loved and have a sense of belonging. An important part of that belonging is being not just accepted, but *appreciated* for who we are. Our students—indeed, our staff members—need to be recognized and valued for their race, socioeconomic status, family arrangement, sexual orientation, ethnicity, physical appearance, age, religion, and level of ableness. Perhaps part of the reason some people see the term *diversity* as less meaningful is because it applies to so many aspects of people, but the reality is that all these aspects are valid.

Race jumps out at us when we think about diversity because it's usually so obvious. Our country's history is rife with situations in which race was used to exclude and discriminate; sadly, although significant gains have been made, this issue remains with us. For example, in Claude Steele's book, *Whistling Vivaldi*, he discusses stereotype threat.<sup>2</sup> This occurs when individuals who have been freshly reminded that they are part of a group associated with a negative stereotype perform more poorly because of that reminder, thus reinforcing that stereotype. But race is just

We need to work to respect the whole spectrum of diversities that walk through our doors.





one variable we need to affirm. If we want our students to be full members of the community and feel a sense of belonging, we need to work to respect the whole spectrum of diversities that walk through our doors.

### Needed: A Point Person

So what can school leaders do to ensure that all students feel included and respected? How can we be sure that the word *diversity* implies values and leads to action?

First, regardless of the diversity of the school community and irrespective of the race of the principal, every school needs a diversity champion, someone who lives, breathes, and proselytizes diversity. This can be an administrator or a teacher. The role should have a title so that there's accountability and no confusion. At my school, a teacher is our director of diversity.

The key qualification for this role is passion for these issues. Beyond that, the diversity champion needs

knowledge about diversity, skill in listening to others, comfort in working with groups of people, a strong heart, and a thick skin. Pursuing diversity isn't simple or easy! Personally, I think it is best if the diversity champion is not the principal because then there's at least a two-person team on the case. The principal should select the champion, but there needs to be strong staff input.

The diversity champion must join conversations among leaders about plans and strategies. The champion ensures that in all situations and decisions, people consider the importance of making the school more diverse, and he or she often proclaims—in words and actions—that the various races, religions, and so on are valued. For example, the champion makes sure that inclusion and diversity are regular topics at faculty meetings focusing on professional growth and that the administration sets diversity goals and strategies for the school. He or she is involved in hiring decisions


and may organize parent education sessions centered on valuing diversity. At my own school, our diversity director has led us in thinking about how to respond to the tragedy in nearby Ferguson, Missouri.

When our actions ensure that every person is respected and our school environment and curriculum validate all human variables, using the word *diversity* makes a powerful, clear statement. Who's the diversity champion at your school? If you don't have one, who could it be? <sup>1</sup>

<sup>1</sup>Holmes, A. (November 1, 2015). Has "diversity" lost its meaning? *The New York Times*, p. mm21.

<sup>2</sup>Steele, C. M. (2011). *Whistling Vivaldi*. New York: Norton.

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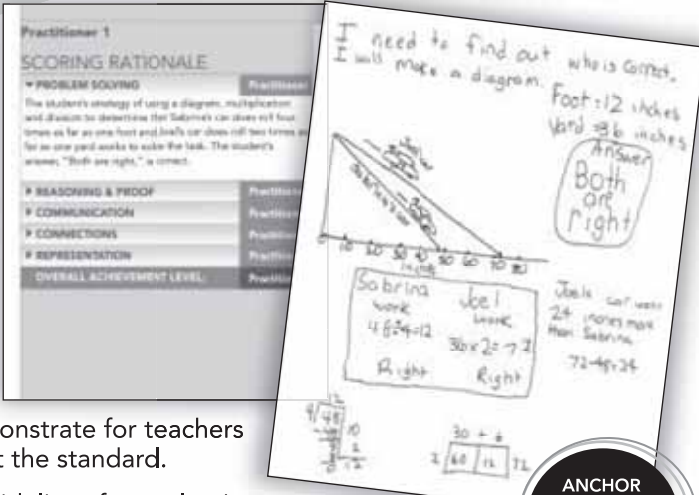


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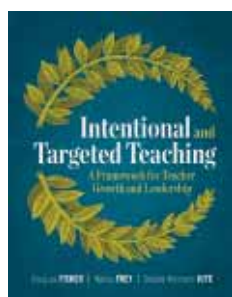
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## Beyond Grades and “Gotchas”

**M**y perspectives on looking at student work have been honed over many years of teaching. I don’t pretend to have it all right yet, but I think I’m wiser about that aspect of teaching than I was in my early years. Over time, I’ve arrived at four conclusions. Although a part of me wishes someone had told me these things as a beginning teacher, I know there’s a difference between being handed a list of do’s and don’ts and developing an understanding of how learning works. As Linus once told Charlie Brown, “There’s a difference between a philosophy and a bumper sticker.” Here are four elements of my evolving philosophy about looking at student work.

### Clarity All Around

My effectiveness in guiding students begins long before I eyeball a student’s work in progress, pick up a project, or respond to a performance. I should start each segment of study—a day, a week, a unit, a marking period, a year—with clarity about what matters most for students to know, understand, and be able to do during that span of time. Whatever follows in instruction and assessment should fall in line with that decision.

Once I’ve developed that clarity, I need to be sure my students are as clear about our destination as I am. If students understand “the game plan,” their practice is more focused, and their capacity for success is enhanced. Likewise, my ability to look at and respond to their work is more purposeful, effective, and efficient.

### People First

I like to think about responding to student work as a conversation with a child rather than as marking papers. When I put the student in the

foreground, several things happen. I remember that the paper belongs to a young human being. I want my reaction to encourage that student and acknowledge what he or she has done effectively—not return a paper that looks like I was on a “gotcha” expedition. Even when I must give a grade, I want to provide feedback that tells a more important story. I want my comments to be instructive so the student is more likely to feel empowered than diminished.

I also want the student to see each piece of work as a step in a long and coherent process of growth, not as a final edict. In instances where the work is deeply flawed, and it’s necessary to indicate that reality, I’d like to send this message:

“This is not your best work. You missed the target in these ways. Let’s set goals that will ensure you do quality work.” When I think of the student to whom I’ll return the paper, I give feedback more as a coach or mentor than a judge.

### Student Power

My best work enables students to be captains of their academic growth. How I look at and respond to their work is a significant part of how I facilitate student agency.

Certainly task directions that clarify targets are important. Timelines and intermediate check-ins can help students do better than last-minute panic. Asking students to review their work using rubrics can assist them in making quality revisions. When I’m looking at in-process work in class, it may sometimes be better to ask questions than to point out errors. Perhaps I’ll say, “I’m looking at your response and want you to figure out why I’m concerned. I’ll come back soon to see what you’ve decided.”

I like to think about  
responding to student  
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as marking papers.





Carefully teaching students to provide focused feedback to one another can help them define what success looks like—and what it doesn't look like. For instance, it's enlightening for a student who says, "I studied for 30 minutes" to hear a peer say, "I worked every night this week until I was confident I was prepared."

I particularly like to ask students to plan to address feedback they have received on their work. "What are the strengths, and what will you do to build on them? What still needs attention, and how will you attend to those gaps? What improvements will I see in your next piece of work?" In other words, my response to student work should help students learn to learn more effectively.

#### One at a Time, Over Time


I subscribe to the admonition of Hattie and Yates (2014) that feedback needs to be tailored to students' varied points of development.<sup>1</sup> After all, kids grow

## As Linus once told Charlie Brown, "There's a difference between a philosophy and a bumper sticker."

up in variable ways and develop along different time continuums.

When I look at student work, I should do so in large measure to understand where a student is in his or her development. I need to respond in a way that moves that particular student forward at that particular moment. Hattie and Yates suggest using *corrective feedback* for a student at early points of a learning sequence, *process feedback* at intermediate stages, and *elaborate and conceptual feedback* at advanced levels. They also remind us that as students grow, our feedback should reflect that growth;

our responses should never indicate an expectation that a learner remain static.

In the end, how I look at and respond to student work should help me grow my understanding of my students, my content, and my craft. It should also be a catalyst for student development in both what they are learning and how they go about the learning process. 

<sup>1</sup>Hattie, J., & Yates, G. (2014). *Visible learning and the science of how we learn*. New York: Routledge.

**Carol Ann Tomlinson** (cat3y@virginia.edu) is William Clay Parrish Jr. Professor and Chair of Educational Leadership, Foundation, and Policy at the Curry School of Education, University of Virginia in Charlottesville. She is the author of *The Differentiated Classroom: Responding to the Needs of All Learners* (2nd ed., ASCD, 2014) and, with Michael Murphy, *Leading for Differentiation: Growing Teachers Who Grow Kids* (ASCD, 2015).



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# Tell Me About . . .

## How Your Group Examined Student Work

### **Social Studies Gallery Walk**

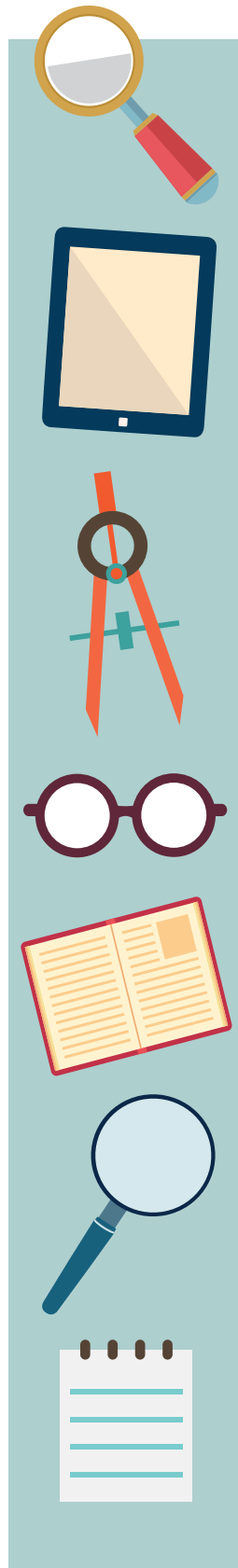
At a schoolwide professional development event, I facilitated a gallery walk to allow teachers to view and comment on interactive student notebooks for social studies. That year we had begun implementing social studies notebooks in the elementary grades, but not all teachers were fully on board. The gallery walk helped teachers see the notebooks' potential.

The student notebooks highlighted the importance of both vertical and horizontal alignment. In terms of vertical alignment, the 1st grade teachers saw how labeling a simple drawing in the early grades would eventually lead to creating annotated, content-based illustrations in the upper grades. Teachers who had not implemented the notebook structure with fidelity realized the purpose of horizontal alignment when they observed the success of colleagues within their grade level. The opportunity to view a continuum of student work allowed teachers to see our students' potential to analyze primary sources, integrate drawings and maps, record their thinking, and learn in a meaningful fashion.

—*Natacha Scott, assistant director of history/social studies, Boston Public Schools, Boston, Massachusetts*

### **A PLC's Realization**

In a recent meeting of our professional learning community, we discussed how we used the same task and rubric to assess student writing. However, as we talked, we realized that each of us had unknowingly stressed different components of student writing in our lessons and activities. For instance, one teacher taught numerous lessons about thesis statements and organization. Another teacher spent more time helping students generate ideas and use textual examples as evidence. So although all of the students' papers were assessed on analyzing and organizing, we each had focused our



feedback according to our areas of instruction. We realized that we not only had to develop the same task and rubric, but we also had to truly agree on how deeply we were going to teach particular objective strands as they applied to student writing. The experience led us to great reflection and also created a stronger PLC.

—*Shawn Reed Parsons, IB coordinator, Academy School District 20, Colorado Springs, Colorado*

### **An Eye for Rigor**

As a university supervisor for student teachers, I incorporate a focus on examining student work for cognitive rigor in my practicums. I decided to do this as a result of the Common Core's emphasis on higher-order thinking, which requires my student teachers to move their own students beyond recall and comprehension levels of thinking.

For these sessions, the student teachers shared copies of an assignment or assessment and the resulting student work. In groups, the student teachers followed a protocol like Critical Friends or Guest Book. By viewing various types of student work using the reflection and analysis dictated by the collaborative protocols, my student teachers gained insights into the types of assignments that truly represent rigor. This ultimately led them to consider how to refine their practice. The student teachers' comments from these sessions, such as "we need to do this more often" and "this makes more sense now," confirmed that this was an enlightening experience.

—*Rebecca Maddas, assistant professor, California University of Pennsylvania, California, Pennsylvania*

**For more reader stories, see the online version of this article at [www.ascd.org/el0416tellmeabout](http://www.ascd.org/el0416tellmeabout).**

# How Does *EL* MEASURE UP?

*A report to readers about the 2015 Educational Leadership Readers Survey*

**A**nyone who reads these days knows that the magazine and newspaper world is changing, with more readers reading online, new devices and apps enticing us, and many different kinds of content grabbing our attention. So it's more important than ever for magazine and journal staffs to seek to know their readers well. This is particularly true of publications with a long history, a category to which *EL* certainly belongs as it heads into its 74th volume year next September.

Enter the 2015 *Educational Leadership* Readers Survey. Conducted by ASCD and Readex Research every three years, this survey asks a randomly selected group of ASCD members, representative of all positions and grade levels, to tell how much they read *EL*, whether it is meeting their interests and needs, what they value about it, and what they might like to see change.

Here's what we learned this year.

## **You are a diverse and influential group.**

Just as you have been for many years, readers are principals, other administrators, teachers, professors, superintendents, and students. And this year, 7 percent of you identified as instructional coaches and another 3 percent as building-level specialists. The grade levels with which you work span preschool to university.

You are also influential in the selection of products for your school or district, with nearly 80 percent of *EL* readers involved in purchasing educational products or services.

## **You read *EL* regularly.**

Seventy-three percent of readers read at least three of the past four issues, with 55 percent reading all four issues. More than three-quarters of you note that you read articles of

interest, with an additional 12 percent telling us you read cover to cover.

## **A very high percentage of you read *EL* in print.**

Although the number of print readers has decreased about 7 percent since 2012, 89 percent of you read *EL* in print, either in addition to digital or just in print. Just over half have read the digital or online edition, and 15 percent use the ASCD or *EL* mobile apps. Just under 10 percent read *EL* only in digital forms. Although a majority of you are aware of the online *EL* archive of all past articles, fewer of you know about the digital edition (the look-alike version with art as opposed to the text-only version on the Web). In addition, only 11 percent indicate that you know about the annual summer digital-only issue (coming up this June), which is a bonus issue e-mailed to members and some non-members and open to all readers.

## **You share your publication at a record rate—print and online.**

In fact, 58 percent of you share your issue with at least one other person, with 17 percent of you sharing with as many as five colleagues. This boosts the pass-along rate to an average of 3.6. That means the magazine has an effective reach of more than 575,000 educators.

## **You take action after reading *EL*.**

Ninety-four percent of you indicated you had taken at least one action, with most of you (85 percent) mentioning having discussed an article with a colleague. You also mentioned saving articles, further researching a topic, and linking to an online source.



### You believe *EL* has many strengths.

On a scale of 1–10, with 10 being highest, the mean scores for each of the survey's positive statements about *EL* ranged from a high of 9.1 to a low of 8.4. The strengths listed included providing up-to-date information, being a trustworthy source, being readable, being attractive, being relevant, and providing multiple viewpoints.

### You rate *EL* higher than its competition.

More than 88 percent of you subscribe to at least one other education publication—*ASCD SmartBrief*, *Education Week*, *Edutopia*, and *Phi Delta Kappan* to name a few. More than three-quarters of you say that *EL* is at least somewhat better than other education publications, with 40 percent reporting that *EL* is much better than other publications that focus on education.

### You like *EL* the way it is, but you also have ideas for new features.

When given a choice to describe a strength of *EL* in your own words, 84 percent complied, resulting in pages of compliments. Many also provided us with food for thought, giving us many good ideas to consider. There was no one overriding specific suggestion, however. Mentioned by 7 percent was a desire for more on a specified topic of interest. About 3 percent suggested an improvement in the digital offerings, and another 3 percent mentioned more international perspectives. Two percent believe *EL* should have more divergent viewpoints, be more research based, and list more resources.

Thank you, Readers, for your comments. *Educational Leadership* is a strong magazine because of its contributors and because of its readers. All of us on the *EL* staff are proud to be a part of bringing educators together to share thoughtful ideas about how to improve education for all.

—Marge Scherer,  
Editor in Chief, *Educational Leadership*

## Words from *EL* Readers

"Every issue contains at least one article written by a voice I respect, and the voices taken as a composite on the theme in an issue usually resonate with mine. Also, I feel empowered when I finish reading an issue." —*Director of an Educational Charity*

"As an administrator in an elementary school, *EL* helps me stay up-to-date on the latest strategies and trends in education. I can use this information to help our faculty and staff stay informed on the latest practices." —*Principal*

"*Ed Leadership* always seems to be hitting the hot topics in education. Just when I am wondering about a particular topic, it never fails, my next edition of *Ed Leadership* is usually focused on that particular topic!" —*Classroom Teacher*

"(I like the) research-based articles on what is working in the classroom." —*Professor*

"It is the voice of sane public education practices." —*Professor*

"*Educational Leadership* is consistently in the front end of emerging issues and best practices." —*Superintendent*

"(I would like to see) less USA content. For a publication that is widely read internationally, this should be reflected." —*Head of School*

"*Educational Leadership* is able to read the times."

—*Minister of Education*

"*Educational Leadership* is my 'go to' magazine when I am looking for articles to share with my staff. The articles are short, but packed with great information." —*Principal*

"I would like to see more diversity of pedagogical perspectives. Because articles are so evidence-based, they lean toward status quo perspectives regarding the Common Core and data-driven model while rarely presenting alternative or innovative views." —*Principal*

"Sometimes I rely on the *Educational Leadership* magazine to give me a heads-up to what I should be looking out for. There are always crucial articles that help with a current issue that we are dealing with in higher education." —*Professor*

"Most of what I see in the magazine is relevant. I like to see and read about what is being used and is effective, not theory and dream-world." —*Principal*

"One of the strengths of *Ed Leadership* is the way that the articles all follow themes. This gives me several ways to look at the topic."

—*Special Education Teacher*

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## Teach to Lead

Launched in March 2014, Teach to Lead is a joint effort of the National Board for Professional Teaching Standards, U.S. Department of Education, and ASCD to advance student outcomes by expanding opportunities for teacher leadership. The initiative seeks to spur fundamental changes in the culture of schools and the teaching profession so that teachers can play a more central role in the development of policies that affect their work.

In its first year alone, Teach to Lead has engaged with more than 3,700 educators, in-person and online. The initiative has held six two-day summits and given voice to more than 875 teacher leadership ideas in 42 states. In partnership with more than 100 supporting organizations, Teach to Lead has spurred thousands of teachers to take the reins of change in their schools and communities using their own ideas.

For more information about Teach to Lead and ways to become involved, visit [www.teachtolead.org](http://www.teachtolead.org) and join the online community at <http://edconnectr.connectededucators.org>.

## Upcoming ASCD Conferences

Find more about these upcoming conferences at [www.ascd.org/conferences](http://www.ascd.org/conferences).

### 2016 ASCD Conference on Teaching Excellence

July 8–10, 2016, in New Orleans, LA  
Explore bold new directions in teaching practice.

### 2016 ASCD Conference on Educational Leadership

November 4–6, 2016, in National Harbor, MD

This ASCD event will address your leadership needs with immediate and practical solutions.

## VOTE in the 2016 ASCD General Membership Election

Voting is now open to fill two positions on ASCD's 2016–17 Board of Directors. The candidates are:

- Phillip Caposey, Superintendent, Meridian Community Unit School District 223, Stillman Valley, IL

- Ember Conley, Superintendent, Park City School District, Park City, UT

- Lou Howell, Executive Director, Iowa ASCD, Urbandale, IA

- Melanie Kay-Wyatt, Principal, Fredericksburg City Schools, Fredericksburg, VA

- Thomas Tramaglino, Superintendent, Kenilworth School District, Kenilworth, NJ

To cast your vote, visit [www.ascd.org/vote](http://www.ascd.org/vote) and log in with your member ID and password. The election closes on April 30, 2016. Please contact ASCD Governance at [governance@ascd.org](mailto:governance@ascd.org) with any questions.

## Resources on Looking at Student Work

*The Formative Assessment Action Plan: Practical Steps to More Successful Teaching and Learning* (ASCD, 2011) by Nancy Frey and Douglas Fisher. Stock No. 111013. \$17.95 (member); \$23.95 (non-member).

Two of ASCD's most popular authors, Nancy Frey and Douglas Fisher, reveal how to create a fail-safe assessment system that leads to purposeful lessons and clear indicators of student understanding.

*Formative Assessment Strategies for Every Classroom: An ASCD Action Tool, 2nd Edition* (ASCD, 2010) by Susan M. Brookhart. Stock No. 111005. \$49.00 (member); \$69.00 (non-member).

The updated second edition of this best-selling resource from assessment

expert Susan M. Brookhart gives you more than 60 tools to use with students in every grade level and subject.

*Grading and Group Work: How do I assess individual learning when students work together?* (ASCD Arias, 2013) by Susan M. Brookhart. Stock No. SF113073. \$9.99 (member); \$12.99 (non-member).

Learn how to formatively assess and grade group work, including learning skills, group interaction skills, and individual achievement.

*Rethinking Homework: Best Practices That Support Diverse Needs* (ASCD, 2009) by Cathy Vatterott. Stock No. 108071. \$18.95 (member); \$23.95 (non-member).

A popular presenter known as the "Homework Lady" shows how teachers can design quality, differentiated homework tasks and implement homework strategies and support programs.



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# 7 Ways to Look at Student Work

**The only important thing about feedback is what students do with it.**

—Dylan Wiliam, p. 10

**Learning progressions based on decades of research on how students learn can help teachers take a more fruitful look at student work.**

—Jennifer L. Koblin and Nicole Panorkou, p. 32

**A few well-designed questions are better than many superficial ones.**

—Heidi Kroog, Kristin King Hess, and Maria Araceli Ruiz-Primo, p. 22

**Grading is more of a challenge of effective communication than a simple documentation of achievement.**

—Thomas R. Guskey and Lee Ann Jung, p. 50

**Showing students other students' work, critiquing it, and trying to make improvements is powerful because it is the way that most people learn.**

—Rob Traver, p. 68

**If students aren't skilled in listening, they won't benefit from feedback.**

—John Hattie, Douglas Fisher, and Nancy Frey, p. 16

**As they approach a new unit, students should focus on what they're going to learn. We want students to think about how they will be different after doing this project.**

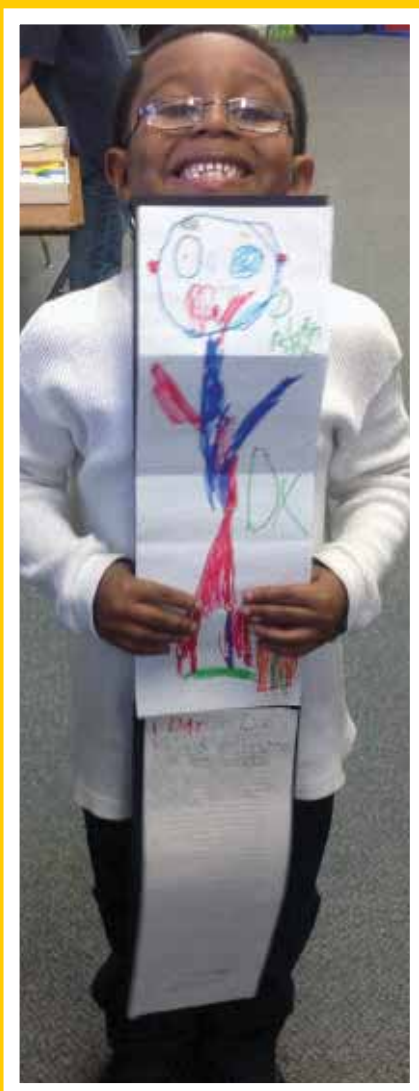
—Thomas R. Guskey and Jay McTighe, p. 38

Source: The collective wisdom of authors published in the April 2016 issue of *Educational Leadership*, "Looking at Student Work" (Volume 73, Issue 7).



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