

EDUCATION WEEK

SPOTLIGHT



Leah Nash for Education Week

Patrick Kilty, a Summit High history teacher, is integrating new digital tools into lessons to develop better ways to generate ongoing feedback about individual student performance.

FORMATIVE ASSESSMENT

Editor's Note: Formative assessments can offer educators a powerful approach to personalized learning. In this Spotlight, explore how the common core is changing assessment, how teachers are evaluating and employing formative assessment resources, and how digital tools offer new avenues of assessment.

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Teachers May Need to Deepen Assessment Practices for Common Core

By Liana Heitin

For Olivia Lozano and Gabriela Cardenas, team teachers at the UCLA Lab School in Los Angeles, understanding what each of their students know and can do at any point in time is so integral to their practice that they call themselves “teacher researchers.”

Over the 10 years they’ve worked together, the two have put formative assessment at the center of their instructional routines. Each day during workshop time, they pull students aside one-on-one or in small groups to ask open-ended questions about the lesson at hand and to gain insight into each 1st and 2nd graders’ thinking.

“I have a conferencing binder where I’m taking copious notes on each individual student. I analyze their work and see where they’re at,” said Lozano. “I really feel it’s grounded me and how I make decisions about what my next pedagogical move will be.”

More than just a buzzword among savvy educators, formative assessment is the ongoing process of collecting data on what students know or don’t know, and changing instruction accordingly. The idea is that with a clear vision of the progress each student is making, teachers can adjust their lesson plans and provide necessary interventions to improve individual achievement. As Nancy Gerzon, a researcher at the San Francisco-based WestEd who specializes in formative assessment, explained, “It’s differentiation with more evidence as to why you’re differentiating.”

A Full Picture

For many teachers, formative assessment has traditionally consisted of quick checks for understanding, Friday quizzes, or exit slips as students head out the door. But as the majority of teachers around the country transition to the Common Core State Standards—which are designed to emphasize complexity, critical thinking, and skills like collaboration and reasoning—some experts say more teachers need to deepen their assessment practices. In

other words, they need to begin seeing themselves, like Lozano and Cardenas, as teacher researchers.

“If you’re asking students to think critically, you have to have formative-assessment practices that tap into that critical thinking,” explained Nancy Frey, an education professor at San Diego State University and co-author of a book on formative assessment.

The common standards are asking students to do that and more. They are aimed at “building children’s capacity to think, and analyze, and communicate, and reason,” said Margaret Heritage, the assistant director for professional development at the National Center for Research on Evaluation, Standards, and Student Testing at UCLA. “We need to know if [students are] grappling with complex ideas,” said Heritage, who mentored Lozano and Cardenas. “Where are they? Is the idea beginning to consolidate? What do I need to do to go deeper and really help them get this?”

All of that may be tough to measure with quick-answer questions or exit slips. Instead, to get a full picture of student understanding, teachers need to ask open-ended questions and push students to explore ideas aloud, the UCLA educators say. “When [students are] solving problems mathematically, they say, ‘I did it in my head,’” said Cardenas. “And you ask, ‘Can you let me in to what’s going on? Into your thinking?’”

With the common standards, “classrooms will look different,” said Heritage. “We’ll need a lot more talking, more focus, more discourse, more depth.”

Cardenas and Lozano spend conference time asking guiding questions and posing strategies to help lead students toward an answer—and to get them talking about their thinking. “You’re developing their metacognition skills, helping them think about ‘What kind of a learner am I? What’s going to help me learn better?’” Lozano explained. “It helps to give them a voice.”

Listening Skills

Perhaps the most central aspect of being an

effective teacher researcher, the team teachers say, is listening. In addition to paying attention to what students express during one-on-one sessions, teachers should be listening to what students say throughout class. “When children are working together, we can also listen in,” said Lozano. “And when they’re having a difficult time explaining [what we’re working on] to each other, we can say, ‘OK, this child needs more support.’”

Frey of San Diego State University tells teachers that, when listening closely to students, “The question you have to ask yourself is not whether the answer is correct or incorrect, but rather what is it likely that that student knows and doesn’t know in this moment in time that would lead him to that response?”

“It takes a different kind of listening,” Frey said, and rather than an innate talent, it is “a habit to be developed.”

Another technique for potentially deepening assessment practices—and complying with the new standards’ focus on collaboration and communication—is to have students assess each other.

Amanda Peci, director of curriculum at the Washington, D.C.-based Center City Public Charter Schools, pointed out that one of the mathematical practices required by the common standards is to “construct viable arguments and critique the reasoning of others.” She said this may lead to teachers using more peer review during their lessons. “Ideally we want to be moving into a place where students are doing that heavy lifting and their formative assessment is how they evaluate someone else and how they talk about it.”

Moving Toward Inquiry

Peci noted, however, that getting teachers to that point will be a process.

As of now, most of the K-8 math teachers in Center City school use an “I do, we do, you do” lesson format. After direct instruction, the students and teacher do a problem together, during which the teacher walks around to do a quick check for understanding, Peci explained. The lesson ends with a one- or

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two-question exit ticket, often made up of multiple-choice items pulled from an online assessment bank.

In light of the math common standards' emphasis on performance tasks and constructing arguments, however, Peci said teachers will need to begin using more inquiry-based problem-solving. That might entail "20 minutes of students digging deep into one problem and debating," she said. "Ideally that could be an entire lesson eventually. And that would drastically change what our formative assessment looks like."

Rather than asking multiple-choice questions or scanning quickly for right and wrong, teachers will need to be attuned to what students are saying during those discussion and debate sessions. "If you're walking around with a clipboard or notebook as kids are working through application, you're hearing, are they using mathematical thinking? Are they attending to precision? How well are they using the mathematical practices?" said Peci.

And while some teachers are already asking these questions, full-scale adoption of new assessment techniques will not happen overnight. "I see this as being a three-year process, even though we only have a year before PARCC [the common core-aligned assessment to be used in Washington] starts," Peci said. "It will take time to evolve to the point where we change to meet where the common core asks us to. In our urban environment, it's particularly difficult."

Assessment Tools

Meanwhile, the two main common-core assessment groups—the aforementioned Partnership for Assessment of Readiness for College and Careers and the Smarter Balanced Assessment Consortium—are planning to support teachers with formative assessment.

Smarter Balanced is putting out a "digital library," which Chrys Mursky, the group's director of professional learning, emphasized is "not a test bank of items" but a group of digital resources aimed at helping teachers build their own formative assessments. The library will be available by the time the Smarter Balanced assessments are ready to use, but only for teachers in states that purchase the full suite of tests.

PARCC plans to have adaptive, online "non-summative" tests for students available to all teachers in PARCC states. However, Bob Bickerton, co-chair of the PARCC non-summative working group, said the consortium is still currently looking for a vendor for some of the formative tools, so those will not be available until the 2015-16 school year.

Formative Assessment Tools From the Consortia	
PARCC	vs. Smarter Balanced
<p>What will assessments consist of?</p> <ul style="list-style-type: none"> • "Formative tools" for kindergartners and 1st graders and adaptive "diagnostic tests" for grades 2-8. These will be administered online, and teachers can select the parameters to evaluate progress on particular standards or across a learning progression. • There will also be tests of speaking and listening skills, which fall somewhere between summative and non-summative, and "mid-year" assessments. They will look similar to the summative assessments and can be administered at any time. 	<ul style="list-style-type: none"> • A digital library with three components: <ol style="list-style-type: none"> 1. "Assessment literacy modules" that teach educators about balanced assessment. 2. "Exemplar instructional modules" that demonstrate formative-assessment practices and include classroom and animated footage. 3. Education resources, vetted and developed by educators, to support teachers in implementing formative assessments.
<p>A vendor will create the items, which will be vetted by educators and state staff.</p>	<p>Who created the assessments?</p> <p>State leadership teams support state networks of educators to create and vet educational resources. The assessment-literacy modules and exemplar-instruction modules are "commissioned."</p>
<p>What company will administer?</p> <p>Pearson will develop and administer diagnostic tests (and final standardized assessments). There is currently no vendor for the K-1 formative tools for speaking and listening tests; these are being rebid.</p>	<p>Amplify will build digital-library platform and host through beta testing. Smarter Balanced will host the library after Sept. 2014.</p>
<p>States/districts who pay the "modest fee" for the non-summative tests; the cost model has yet to be determined.</p>	<p>Who will have access?</p> <p>Educators in states that purchase the full suite of tests. Educators in all grades will have access to the digital library.</p>
<p>When will the assessments be ready?</p> <p>During the 2015-16 school year.</p>	<p>A beta version will be available in spring 2014. The operational system will launch during the 2014-15 school year.</p>
<p>Sources: Chrys Mursky, director of professional learning at Smarter Balanced; Bob Bickerton, co-chair of the PARCC non-summative working group</p>	<p>Reporting by: Liana Heitin Visualization by: Mariena Chertock</p> <p>EDUCATION WEEK TEACHER</p>

Consortia Comparison

The national consortia charged with creating common-core-aligned tests are taking different approaches to formative-assessment items.

But it remains to be seen whether these formative-assessment tools can really offer the deep dive into student understanding that teachers are likely to be aiming for. And according to Frey, teachers are "shifting from understanding formative assessments as a noun—as a bunch of tools—to really thinking more closely about formative assessment

as a practice," and seeing more opportunities according to Frey, teachers are "shifting from understanding formative assessments as a noun—as a bunch of tools—to really thinking more closely about formative assessment as a practice," and seeing more opportunities for ongoing data collection.

The data teachers are looking for, Frey said, is "all around you. It's whether you choose to pay attention to it and act upon it. That's where the struggle is."

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Testing Digital Tools to Improve Formative Assessments

By Benjamin Herold
Bend, Ore.

The digital learning tools flooding schools come with a tantalizing promise: real-time feedback on what children know, combined with fingertip access to a dizzying array of tailored instructional materials, resulting in more customized instruction from teachers and a more personalized learning experience for each student.

It's a technology-enhanced version of the feedback loop that educators call formative assessment. But even in the most tech-

savvy public schools, the digital overhaul of this vital classroom practice is just beginning, and skeptics worry that many of the new products being touted by ed-tech companies will serve primarily to enable more efficient use of poor formative-assessment techniques.

"I think the potential of technology to improve formative assessment is significant, but I can't say I've really seen it in action yet," said Margaret Heritage, the assistant director for professional development at the National Center for Research on Evaluation, Standards & Student Testing, or CRESST, at the University of California, Los Angeles.

"It's not about giving teachers digital tools. It's about helping them embrace a different way of teaching."

Since well before the ed-tech revolution began, experts like Ms. Heritage have contended that effective classroom formative assessment is patchy at best. They've pointed to a lack of time, training, and resources for busy classroom teachers and an overemphasis on high-stakes standardized testing as barriers to improvement.

Sensing a need, vendors large and small have pounced. Publishers and giant education service companies are rolling out comprehensive digital platforms and curricula

Patrick Kilty, a Summit High history teacher, is integrating new digital tools into lessons to develop better ways to generate ongoing feedback about individual student performance.



in the hopes that districts will embrace all-in-one solutions. Startups and app makers, meanwhile, are offering a growing menu of smaller-scale tools aimed at improving specific components of the classroom-feedback loop.

'Hybrid' Teaching

Both approaches are on display here at Summit High School, located in the foothills of the Cascade mountains in an upscale part of this ski town in central Oregon. Some teachers are using a new digital platform known as PEAK12 (short for Personalize, Engage, and Achieve with K12), the latest product from the Herndon, Va.-based K12 Inc., the country's largest private provider of online educational services to precollegiate schools. Others have embraced an à la carte approach, mixing and matching classroom tools such as Socrative, a free app for quickly scanning dozens of student responses with the swipe of a finger.

The early returns are uneven, but encouraging.

Almost overnight, Summit teachers have begun using the new technologies to track the time students spend on reading assignments, take quick snapshots of how well whole classrooms understand new mathematics concepts, and examine the complexities of teenagers' relationship to writing.

Summit Principal Alice DeWittie has encouraged the experimentation.

"The core principle is looking at student work, and based on that, changing what comes next in your instruction," Ms. DeWittie said. "Technology just enhances it and makes it easier."

Summit, a high-performing school with a student body that is 89 percent white, is one of five high schools in Oregon's 16,000-student Bend-La Pine district.

On a recent frigid morning, juniors carrying iPads and wearing sweatshirts emblazoned with snowboard-company logos filed into Patrick Kilty's third-period U.S. history class, now being taught in a "hybrid" manner that involves both face-to-face and online learning.

So far, the 43-year-old Mr. Kilty has been the Summit teacher to make the heaviest use of the new ed-tech tools from K12 Inc., which recently rebranded the division of the company providing services to schools and districts under the moniker Fuel Education LLC. PEAK12 is intended as a one-stop shop that integrates digital content, assessments, and data dashboards from the company, third-party vendors, and teachers themselves.

The digital curriculum used by Mr. Kilty, which includes readings and regular quizzes,

is hosted on PEAK12. He manages the class through Blackboard, a third-party learning-management system that can sit on the PEAK12 platform. And through PEAK12, Mr. Kilty accesses regular reports on students' quiz performance and time spent online reviewing class materials.

K12, much like other large education services companies, is betting that districts will turn to such comprehensive systems as a



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ALICE DEWITTIE

Principal, Summit High School

means of bringing online offerings that previously stood alone into brick-and-mortar schools—a push being driven in part by the desire to improve classroom-feedback loops.

On this day, Mr. Kilty's class is beginning a unit on the reconstruction of the American South following the Civil War. The digital curriculum from K12, which students are expected to read on their own time, consists of a cursory written overview of the era's major events and ideas, interspersed with maps and graphs. Embedded within the curriculum is a formative assessment in the form of a quiz, which students are expected to take online at their own discretion, that includes 10 multiple-choice items covering basic facts and vocabulary.

Eventually, Mr. Kilty will use the resulting digital data to make a basic instructional adjustment: sorting his students into groups. As part of the new hybrid model, most students are required to attend the face-to-face portion of his class just three days a week. But those who are "red-flagged" in the PEAK12 reports for not spending enough time reading online or for poor quiz performance are required to attend every day.

Ms. Heritage of CRESST questioned the educational value of that approach as it was described to her. Too often, she and other experts maintain, formative assessment is

seen as little more than pop quizzes and "mini-summative assessments," neither of which provide high-quality data on what students are thinking, learning, and doing. The quiz items from the Reconstruction unit of the K12 curriculum, Ms. Heritage said, "don't tap into deeper learning and don't tell what a child has or hasn't learned or is on the cusp of achieving."

"This seems to be an example of using digital technology for its own sake and actually taking away from the richness of the classroom," she concluded.

Depth vs. Breadth

Mr. Kilty doesn't entirely disagree, saying the digital curricula from K12 is only "an inch deep" and acknowledging that the formative-assessment data he receives in the form of usage statistics and quiz grades provide only broad strokes of information about his students.

But for real teachers faced with real classroom constraints, Mr. Kilty said, that information is quite useful, especially because of the fast and user-friendly way in which the PEAK12 system makes it available. Now, he said, he can determine before class even starts if struggling students have fallen behind because of a lack of effort or a lack of comprehension. That allows him to tailor his interventions for those students without losing precious face-to-face time with the rest of the class.

As a result, Mr. Kilty said, he can focus those sessions on what he believes really matters: the skills required of historians, such as analyzing primary-source documents, and the skills embodied in the new Common Core State Standards, such as constructing and writing persuasive arguments.

During the recent third-period lesson, Mr. Kilty quickly reminded students about the online readings and quizzes that were due later that week, offering encouragement to individual teenagers based on what the PEAK12 system has told him of their progress.

Then he quickly thrust the class into their task for the day.

"You're going to play the role of a lawyer," Mr. Kilty told his students. "First, you need to find constitutional evidence for why the legislative branch should be the one to control Reconstruction."

As the students dove into the text of the document on their iPads, Mr. Kilty circulated around the room, engaging in animated conversations with students about their research—an old-school form of formative assessment.

The use of digital tools to gauge student understanding is a novel concept for a vet-

eran teacher, said Mr. Kilty, and the K12 platform has allowed him to begin cautiously. Now that he has the basics under his belt, he said, the next challenge is to use the new tools to revamp how he assesses students' critical-thinking skills.

Mixing and Matching Apps

Other Summit High teachers have taken a more modular approach, using a variety of new ed-tech tools to elicit evidence of student learning as their lessons take place, diagnose students' misconceptions, and make informed decisions about where in the classroom to focus their attention—all skills that experts describe as central to effective formative assessment.

During a recent lesson in Brandon Thompson's geometry class, for example, students used four separate classroom apps to learn about finding the area of triangles that contain no 90-degree angles. Despite the variety of tools being used in the classroom, the lesson went off without a hitch, with both teacher and students switching seamlessly among tools even though they had only been introduced a few months earlier.

First, Mr. Thompson had the class download problems from iTunesU, a course-management tool from Apple Inc., and begin solving them in Notability, a digital note-taking app.

Shortly after the students began, Mr. Thompson asked them to use the Socrative app to submit their solutions directly from their iPads to his. As he walked around the room, Mr. Thompson scrolled through a single screen that contained each student's name and response. One student appeared way off base; the teacher stopped by to work with him directly. Overall, the snapshot revealed that most students got the overall gist, although many made rounding mistakes and failed to properly notate the unit of analysis.

Based on the information from Socrative and conversations with students as he circulated the room, Mr. Thompson then identified two—one of whose work illustrated the common misunderstandings and another whose work demonstrated a creative problem-solving approach—and asked them to “beam in.” Using an app called Airplay, the

students projected the screens of their iPads onto a wall at the front of the room.

“Camille, would you talk us through what's going on here?” Mr. Thompson asked. A quick classwide discussion served to both illuminate the process by which the student solved the problem and highlight the procedural error made by much of the class. Murmurs of understanding rippled through the room. Mr. Thompson concluded that the class was ready to move on, so he repeated the process, but with a more difficult challenge: This time, students were asked to develop an original formula that would allow them to solve for the area of any non-right triangle.

“That's a good use of technology for formative assessment,” Ms. Heritage of CRESST said when the lesson was described to her.

Finding the Right Fit

Ultimately, Ms. Heritage and other experts believe, the real potential of technology is less about making formative assessment easier and more about making it better. That could mean better ways of curating multiple sources of evidence about a child's learning, improved use of multimedia tools to capture student work and thinking, and new tools that encourage and help students measure their own learning—a critical component of formative assessment that experts say is frequently overlooked.

Officials from K12 Inc. believe that PEAK12 can be the foundation upon which such solutions are brought into classrooms; the key, they say, is a smart digital platform that is comprehensive enough to be the single point of entry to digital learning for an entire school or district, but flexible enough to allow teachers to bring in both third-party tools and their own content.

The market for educational apps and software, meanwhile, continues to grow and diversify.

Principal DeWittie said that context matters when deciding which approach to embrace. Her previous school, she said, was characterized by a high level of instability and tremendous variation in students' academic abilities and teachers' readiness to embrace new technology. There, a “whole school” approach might be the best fit, she

maintained.

But at Summit—high-performing, stable, and relatively homogenous, with a cadre of talented and ambitious teachers—it's been about investing in people first, and tools second.

The result is a rapidly evolving—and somewhat messy—school culture when it comes to technology and formative assessment.

Mr. Thompson and another math teacher are already busy training other Summit staff members how to combine the apps that have been so effective in their classrooms.

And next school year, a total of five Summit courses will be taught in a hybrid manner with K12 tools, à la Mr. Kilty's class.

But the history teacher has already begun experimenting with other tools, such as Google Forms, a cloud-based tool through which he created his own assessments of students' ability to identify point of view and bias in primary-source documents.

“It's a new frontier for me,” Mr. Kilty said. “I'm still learning.”



It's a new frontier for me. I'm still learning.”

PATRICK KILTY

U.S. history Teacher, Summit High School, Bend-La Pine district, Oregon

Looking at Assessment Data Differently

By: Dr. Sally I'Anson

In recent years, lack of ease and efficiency were often cited as the culprits for why teachers were not accessing and using student performance data. They couldn't locate the data easily, and when they did, the process for analyzing and using the data was clumsy, time consuming and often confined to specific departments. Fortunately, education technology companies figured out how to create innovative and exciting tools to solve most issues of accessibility and efficiency. Despite these improvements, a conundrum emerged. Teachers were STILL not using data to inform their instructional planning and provide immediate and specific feedback to their students.

EASE AND EFFICIENCY

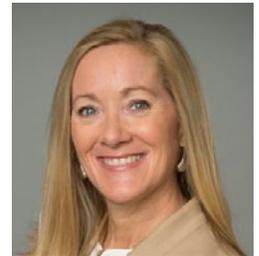
The majority of teachers are now facile users of assessment reporting tools. They expertly and efficiently enter grades in their electronic grade books and print or email reports required by their supervisor. They are also likely to use data to identify and monitor gifted students, students needing academic interventions, or students eligible for special education services. In many instances, student performance data were, and continue to be, used to populate reports required by federal programs. Teachers working in priority and focus schools have been particularly influenced by this use of data.

The No Child Left Behind Federal Act and subsequent waivers are still very much part of life in America's schools. Every year, superintendents, principals, and teachers are expected to meet set standards for student achievement in tested grades and subjects as determined by their state's legislature. The documentation and reporting of student data cannot and should not be ignored. State and federal departments of education provide various levels of support and examination based on annual district and school achievement scores. Teachers have engaged in the process of standardized testing and reporting because not only are they required by law to do so, but also they recognize the importance of ensuring their students are prepared to perform well on state summative assessments. They have experienced the joys of success and the repercussions of failure on state assessments. Knowledge of the process and years of testing experiences have formed teacher values and beliefs about the use of student performance data. Teachers have learned that student performance data can provide valuable insight into needed changes to curricula, materials and resources, and schedules, as well as adjustments to intervention programs, among others.

SUMMATIVE ASSESSMENT

At the same time, teachers recognize that the examination of summative data does little to assist them with their current students' progress. It fails to provide information regarding the standards and

skills where students are excelling, as well as those areas where there are lingering misconceptions, incomplete or partial understanding, or gaps in knowledge. When teachers have access to end-of-course or end-of-grade summative assessment data, those students have moved on to the next grade or course. The usability of this data, as it pertains to their current students, is minimal. Teachers know they cannot make accurate inferences about current student understanding from the end-of-year summative assessment data. Many teachers have the misconception that student performance data are best used for grading, reporting, evaluating curricula, resources, schedules, and certain instructional and intervention programs.



Dr. Sally I'Anson, Director
Professional Development

MISCONCEPTIONS

Recent research on student interventions can be applied to the idea of teacher misconceptions surrounding best practices in the use of assessment data. In her presentation "Planning Instructional Interventions" at the 2014 Learning Forward Conference, Jan Chappuis shared her ideas regarding three types of learning needs: errors due to incomplete understanding, errors due to flaws in reasoning, and errors due to misconceptions. It is Chappuis' concept of errors due to misconceptions that can be applied to the teacher or groups of teachers who still find minimum value in using formative data as an instructional tool to modify individual or common instructional plans and assessments. Chappuis defined errors due to misconceptions as those instances where the learner has

“internalized a concept or explanation of a phenomenon that they believe to be true, but that does not match current best thinking.”

(CHAPPUIS, 2014)

She went on to explain that in order to correct errors of misconception, they must be dislodged from the learner's long-term memory with "*disconfirming evidence*" (Chappuis, 2014) before new information can be taught.

DISCONFIRMING EVIDENCE

So, how then do we find and share with teachers the disconfirming evidence that Chappuis references? The research of John Hattie reveals that formative assessment with appropriate feedback is the most powerful moderator in the enhancement of achievement (Hattie & Timperley, 2007). A world-renowned expert on formative assessment, Jim Popham urges teachers,

“If you want to become more instructionally effective, and if you want your students to achieve more, then formative assessment should be for you.”

(POPHAM, 2008, p.15)

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Districts and schools can support their teachers in a pragmatic way by investing in professional learning courses and programs that utilize formative assessment research as disconfirming evidence to replace teacher misconception of best uses of student performance data. On-going teacher training must dismantle teachers' old understanding of using data for grading, federal reporting measures and evaluating programs, curricula, and schedules, and replace it with a new understanding that formative assessment data can serve as a guiding element for teacher and student discussion of intended learning outcomes. Student and teacher collaboration on learning and formative assessment has the potential to increase significantly the capacity of both parties to learn and grow.

ASSESSMENT LITERACY

Creating this new teacher belief in the formative use of student performance data is possible with constant and consistent training. Assessment literacy is the cornerstone of enabling teachers to embrace the power of data to improve student learning outcomes. Making the connection for teachers between their myriad classroom level assessments, which they administer effortlessly and informally every day, and the analysis and use of that information to provide frequent, actionable, student-centered, and timely feedback to students is the key to our collective success as learners and educators. The advent of the CCSS, Next Generation Science Standards (NGSS) and ever-evolving state standards and their requisite new assessments is more evidence that we need to replace teacher misconceptions regarding uses of student performance data and replace them with new knowledge on proven formative assessment practices.

NEW STATE TESTS

In this first season of administration of the Smarter Balanced Assessment Consortium (SBAC) and Partnership for Assessment of Readiness for College and Careers (PARCC) summative assessments in 43 states, the entire country is anxiously awaiting the results of how students performed on these new tests, which include substantially more rigorous, writing-intensive, multi-step problems than former state assessments. For the seven states that did not adopt the CCSS or have withdrawn from an assessment consortium, they, too, are rapidly developing more rigorous standards and assessments to challenge their students and adequately prepare them to be successful in college or the workforce.

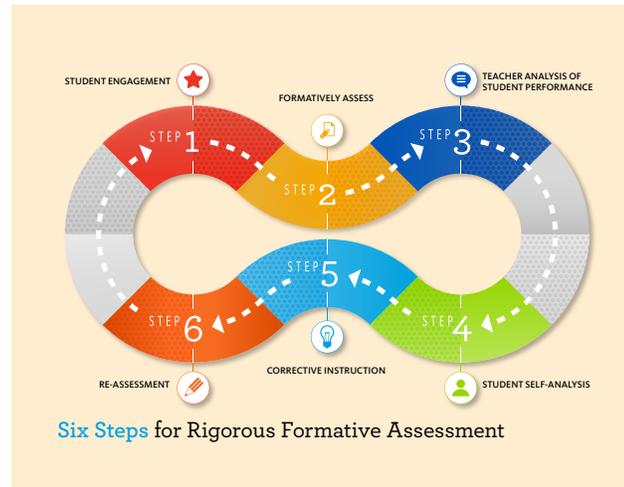
FEEDBACK

Success on SBAC and PARCC assessments is expected to show performance that reflects a much deeper student understanding of standards. Students will be required to demonstrate their learning of new standards at more challenging levels of cognitive complexity. In order for students to effectively "show what they know," teachers will need to continue to transition themselves and their students

from the traditional direct instruction–learning activities–summative assessment cycle to a formative assessment cycle. The former has typically delivered surface level coverage of content with an expectation that on the summative assessment, students will recall facts, factors, and formulas. In contrast, the latter requires teachers to engage students in deeper-level learning through learning tasks that require the use of higher-order thinking skills.

These formative assessments include consistent feedback to students on their growth and progress throughout the learning cycle. Below is a model designed to move teachers and students along a pathway from engagement in the lesson to formative assessment of learning followed by teacher analysis of student performance and student

self-analysis of performance. For students that require additional instruction, the model explains the use of corrective instruction and re-assessment before engaging in the next lesson or task.



*Interactive Achievement's
Six Steps for Rigorous Formative Assessment Infographic*

PROFESSIONAL DEVELOPMENT

Millions of dollars in professional development services and materials have been devoted to helping teachers not only study and learn the new CCSS, NGSS, and new state standards, but also to apply their knowledge of the standards in designing instruction and assessments. Both SBAC and PARCC released sample items, item specifications, and sample

assessments to give teachers examples of what their students would be expected to demonstrate on the new tests. PARCC provided sample items with general rubrics and practice tests for students and teachers to use in preparation for the new assessments. In addition to sample items and assessments, SBAC provided teachers "access to a digital library of formative assessment strategies and practices, including instructional best practices and professional development on assessment literacy" <http://www.smarterbalanced.org/sample-items-and-performance-tasks/>.

PERFORMANCE TASKS

Performance tasks align themselves well to the next-generation standards and assessments for three reasons. First, the expected learning outcomes of the CCSS, Next Generation, and revised state standards can best be assessed using complex, multi-part, text-dependent prompts. The new, more rigorous standards require students to think deeply and produce responses that demonstrate their understanding through a variety of assessment measures. These measures include traditional multiple-choice items, technology-enhanced items, as well as fill-in-the-blank and constructed or extended written response items. Second, performance tasks, when designed well, assess students' thinking at higher levels of cognitive complexity. Using Blooms' Taxonomy as a measure of cognitive complexity, most performance tasks naturally lend themselves to requiring students to produce responses employing higher-level thinking

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skills such as analyze, evaluate, and create. Third, performance tasks are believed to engage students to a greater degree than multiple-choice assessments. Often they include “authentic” tasks that are, or could be, completed by workers in situations outside school walls. Anecdotal evidence suggests students are more engaged with performance tasks as a method of assessing their learning because they find the tasks more intellectually challenging and interesting. In some instances, they mirror potential challenges students might encounter once they are out in the workforce. Performance tasks tend to increase the relevance of the assessment.

RUBRICS

The assessment glue that binds the new standards to performance tasks is the long-lost and much-beloved rubric. Moreover, the use of rubrics is fully aligned to the tenets of formative assessment. The rubric can be used as a tool for teachers to set goals and create a plan of action for students to accomplish certain instructional tasks and meet intended learning outcomes indicated in the standards. The rubric can also be used by students to inform and guide them in completing task requirements and how they are expected to demonstrate mastery of learning expectations. Finally, the rubric gives educators a structured way to provide consistent and targeted feedback to students about their performance and growth along a specified learning continuum. Although rubrics were around long before this latest round of renewed interest in them, their resurgence is welcomed by many veteran teachers that hated to see them go with the passing of NCLB. As with any assessment measure, not all rubrics are created equal, and teachers must take measures to increase levels of reliability and validity into consideration when designing them. Furthermore, teachers must also be cautious when using rubrics for grading purposes.

It took the SBAC and PARCC design and development teams years to develop their new assessments. It will likely take districts, schools, and teachers several more to catch up and create tasks and rubrics that will better prepare their students to be successful on these next-generation assessments.

The CCSS and Next Generation Science Standards, as well as the PARCC and SBACC assessments were designed with the expectation that teachers will embed formative assessment strategies throughout the course or grade level to adequately prepare students to successfully demonstrate mastery of the standards. As a result, the formative use of student performance data throughout the teaching and learning cycle is now a de facto requirement for district, school, and student success. Formative assessment tools provide teachers and students instant access to performance data that allows teachers to draw accurate inferences about student learning and growth. Teachers need this data to inform their lesson planning and adjust instruction to meet the immediate learning needs of every student in their classrooms.



STEP TWO: FORMATIVELY ASSESS

Assessing students for learning and during instruction is key to building a foundation for mastery for every student. It is a continuous process that involves the teacher providing frequent, timely, and highly specific feedback tied to the individual learning goals and objectives of each student. Teachers use assessment data to adjust ongoing teaching to improve students' achievement of intended instructional outcome(s).

SUMMARY

In conclusion, teachers are now able to access and input student assessment information using software that is highly intuitive and in many ways easy to use. Yet, so many of our nation's teachers are still not using data to provide actionable and timely feedback to students and inform their lesson planning. This lack of the formative use of student data can be attributed to a belief system surrounding assessments that is outdated and non-reflective of current best thinking about assessment. This teacher belief system was born with the No Child Left Behind Act and its series of summative assessments. Teachers learned that assessments were used to grade, evaluate, and report student performance data and use those assessment results to make judgments about learning at specified points in time.

NEXT STEPS

The latest research in the field of assessment provides disconfirming evidence that provides teachers with a new lens through which they might view assessment data—formatively. The CCSS and Smarter Balance and PARCC expect teachers to be implementing formative teaching, learning, and assessment practices daily. Performance tasks and rubrics are a few of the key tools to support this instructional model.

Only time will tell if students are adequately prepared for success on the new assessments. It is likely that there remains much work to be done in teacher preparation programs and the continuing education of practitioners before students will be able to fully demonstrate their mastery of the new standards on this new field of summative assessments. That work will surely include ongoing training in formative assessment practices.

What If...

- ★ We focused on providing interesting, differentiated, self-paced training for teachers?
- ★ We allowed teachers to learn how to use an assessment management system or longitudinal data system that prepared them to feel so confident in their interpretations of student data that they readily and willingly changed their instruction?
- ★ We focused on the relationship between the teacher and the student and shared proven ways for them to engage with each other and data to discuss growth and performance and set goals together?
- ★ We focused on how student performance data can alleviate rather than cause teacher and student anxiety?

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Formative-Assessment Tools Shape Personalized Lessons

By Michele Molnar

When he was teaching kindergarten, Shawn C. Rubin used a clipboard and green, yellow, and red crayons to track students' progress on paper. Adjusting his teaching for each student's ability level had the greatest possibility for advancing learning, he said, but it was also the most difficult assessment approach to do.

Now working to advance blended learning—a mix of face-to-face and online education—in all Rhode Island school districts and charter schools, he sees the magnitude of the formative-assessment challenge multiplied exponentially. Elementary teachers need to evaluate “30 students a day in six subject areas with two competencies in each subject, and high school teachers might be tracking 200 students in one subject,” said Mr. Rubin, the director of blended learning for the non-profit Highlander Institute, a Providence, R.I.-based community of educators and professionals, and the CEO and co-founder of Metryx, a Providence-based company that has designed an ed-tech tool that allows teachers to track and analyze student mastery without crayons.

Metryx is just one of dozens of ed-tech products on the market today competing to help teachers and students with some aspect of the formative-assessment process, in which educators gauge learners' understanding to pinpoint precisely what each has mastered, and adjusts teaching accordingly. The competition is heating up, in large part because formative assessments' on-the-spot feedback about student mastery lies at the heart of scaling personalized learning.

But truly effective formative assessments need to go beyond simply evaluating students' knowledge against standards and creating bar charts and graphs to show degrees of mastery, say some observers.

The most important question is: “How does this support the learning process?” said Margaret Heritage, the assistant director for professional development for the National Center for Research on Evaluation, Standards, & Student Testing, or CRESST, at the University of California, Los Angeles. She describes formative assessment as an embedded process in which teachers are collecting evidence while students are learning.

In evaluating the growing collection of formative-assessment products on the market, Ms. Heritage said educators should be asking whether those products give them the items or tools that are linked to their immediate lesson goals and that provide actionable information. “Most things I see out there don't do that,” she said.

Analyzing growth trends in the testing- and assessment-market segments, “we found a lot of excitement—and therefore, demand—around formative, adaptive assessments that support personalized learning,” said John Richards, the president of Consulting Services for Education and the author of “Behind the Data: PreK-12 Testing and Assessment Market,” a report that the Washington-based Software & Information Industry Association was finalizing at press time. Formative-assessment products are now capturing some of the most sophisticated and nuanced learning measurements, including assessing skills such as collaboration, problem-solving, and conceptual understanding, according to Mr. Richards.

Educational technology products that help conduct formative assessments are being packaged in three distinct ways, said Julia F. Freeland, a research fellow for the Clayton Christensen Institute, a San Mateo, Calif.-based think tank that studies trends in personalized learning. It is embedded in online curricula, such as ST Math, Lexia Learning, and DreamBox Learning; it is offered as a stand-alone assessment tool like MasteryCon-

nect and its recent acquisition Socrative; and it is provided as part of adaptive-learning platforms such as Knewton, that aggregate data from numerous assessments and use those results to generate recommendations for individualized learning pathways.

For products that embed questions in online curricula, Ms. Freeland observes varying levels of trust among educators about the quality of those assessments.

In response to that concern, some ed-tech providers—such as MasteryConnect and Renaissance Learning with its STAR Custom—rely in whole or in part on teacher-submitted assessments that can give educators the more-customized feedback they want. Increasingly, ed-tech companies are matching their content and questions to specific standards, including the Common Core State Standards, which can be problematic. “A single question could be tagged against one or multiple standards,” she said. If a student answers a multiple-standard question incorrectly, it can cause confusion for teachers. “How are they expected to unbundle that,” she asked.

Common Core Fuels Interest

The expected rollout this school year of the more complex common-core tests from the Partnership for Assessment of Readiness for College and Careers, or PARCC, and the Smarter Balanced Assessment Consortium brings with it an increasing interest in formative testing that goes beyond multiple choice and true/false responses. Some questions will require test takers to demonstrate the transfer of learning by asking them to show their work, or write a passage, for instance. To measure true transfer of learning, tasks must be “designed to provide students with opportunities to adapt or apply their knowledge in new or unique ways,” said Eric M. Carbaugh, an associate professor in the department of middle,



You can't assess true transfer [of learning] at all with multiple-choice questions”

ERIC M. CARBAUGH Associate Professor, Middle, Secondary, and Math Education, James Madison University, Harrisonburg, Va.

secondary, and math education at James Madison University in Harrisonburg, Va. “You can’t assess true transfer at all with multiple-choice questions,” he said.

Mr. Carbaugh, who consults with schools and districts under the auspices of Alexandria, Va.-based ASCD Professional Learning Services, said many experts recommend a simple “3-2-1” exit-card approach to helping teachers use formative assessments to gauge student understanding: “Give me three big ideas you took away, two questions you have, and one way you think you can use it,” he said he tells teachers. That information can go on a blog, in a journal, or on an index card. “It’s a little messier, from a teacher’s standpoint, but we need to measure more than whether kids can get a right or wrong answer,” he said.

Smarter Balanced recently released its digital library, which features mathematics and English/language arts literacy resources to help teachers with the formative-assessment process that can take the form of assignments, classroom discussions, and other approaches. The consortium contracted with Amplify, based in New York City, to build the interactive online modules, which are “meant to demonstrate how the formative-assessment process is used to implement the intent of the Common Core State Standards,” said Chrys Mursky, Smarter Balanced’s director of professional learning.

Integrating Response Data

The Northwest Evaluation Association, which is based in Portland, Ore. and produces the Measures of Academic Progress interim assessments that are adapted to students’ instructional levels, also owns the Formative Assessment Item Bank it acquired from the Princeton, N.J.-based Educational Testing Service. The 81,000-item bank, which is operated independently of the evaluation association, is usually licensed to platforms that can store and build tests and scan and report on data. It is also licensed directly to some districts.

Some companies are also creating products and services to help educators use polling software and “clicker” technology to have students register responses to formative-assessment questions. Turning Technologies, a Youngstown, Ohio-based company, is one provider that integrates the data from its response systems with interactive whiteboards and on mobile devices. Poll Everywhere is an app that does the same.

Acuity, the McGraw-Hill Education CTB Web-based assessment platform, offers 10- to 20-minute tutorials for students with embedded assessments to check students’ understanding of the material they are trying to learn, and it incorporates an online community where teachers can share resources and

THE MARKET FOR FORMATIVE-TESTING TOOLS

Educators who want immediate feedback about their student comprehension have a growing list of ed-tech products to choose from to help them evaluate student mastery more quickly, and adjust their teaching accordingly. Some of the products that have made their way into schools include:

Acuity

Formative assessments used by more than 1,000 districts.

ForAllRubrics

A portable tool where assessments can be uploaded, created, or borrowed via mobile devices.

InfuseLearning

A student-response assessment tool for “bring your own device” environments.

MasteryConnect

A cloud-based software platform for educators to share and find assessments and resources, track mastery of standards, and use built-in grading tools.

Metryx

A tool to import standards, track mastery, and analyze results to differentiate teaching via mobile devices.

Naiku

Standards-based mobile formative-assessment tool.

Nutmeg Education

Assessment-building based on a question bank submitted by teachers, or teachers can create their own, via mobile devices.

Schoolnet

Pearson’s instructional management system, which includes formative-assessment tools.

Socrative

A tool to track student performance, aggregate results, and provide visuals to show students’ strengths and areas in need of improvement.

SparkWorks

Competency- and cloud-based software for online and mobile adaptive learning.

Taskstream

Portfolio- and data-management system that aims to support outcomes-based assessment.

SOURCES: Excerpted from “Assessing Deeper Learning: A Survey of Performance Assessment and Mastery-Tracking Tools” a report produced by Getting Smart; *Education Week*

tests they have created.

Other formative-testing developments are also worth noting.

For instance, CRESST’s Ms. Heritage said a new K-3 formative-assessment platform in North Carolina that is under development with a state university, using Race to the Top and state funding, looks very promising. At the click of a button, teachers can view a progression and learn about strategies for collecting evidence. Plus, teachers can capture audio and video evidence, and add notes, to document student learning, then review information that would help teachers interpret the evidence, she said.

For the Christensen Institute’s Ms. Free-

land, the fast growth of blended learning and an emerging competency-based education system—similar to what is in place in New Hampshire—are harbingers of future formative-assessment opportunities for schools, and companies, if it is done well.

“As content becomes more widespread and commoditized,” she said, “it’s going to be all about online assessments to verify what students know.”

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Teachers Learn to Judge Utility of Formative-Testing Tools

By Catherine Gewertz
Washington

Four dozen teachers gathered recently to watch a colleague teach a lesson about Ray Bradbury's novel *Fahrenheit 451* and then analyzed her performance.

But they didn't crowd into the Massachusetts teacher's classroom; they watched her deliver the 10th grade English/language arts lesson on a big screen, from a meeting room here. They were using her videotaped lesson to learn how to size up instructional resources like this for possible inclusion in a national digital library.

The Smarter Balanced Assessment Consortium, one of two federally funded groups of states that are designing general assessments for the Common Core State Standards, is setting up the library. The summative tests being built by Smarter Balanced and the other state consortium, the Partnership for Assessment of Readiness for College and Careers, or PARCC, are widely known and hotly debated.

But a lesser-known piece of the two groups' work is to produce tools that teachers can use during the year to support instruction and gauge learning. Among the resources planned for the library are videos and other materials to help teachers deepen their practice, and classroom tools such as organizers and lesson plans that they can use with students.

At a meeting late last month to acquaint teachers with the Smarter Balanced tools, they learned criteria for judging the quality of resources for the digital library and tried applying them to the videotaped lesson taught by the teacher from an Expeditionary Learning school in Springfield, Mass.

The 46 educators were brought together by the American Federation of Teachers, which was conducting a training session for new teacher "ambassadors" who will contribute resources to the digital library and show colleagues in their seven home states how to do likewise. They will also help evaluate the resources submitted by colleagues from across the country. A grant from the Leona M. and Harry B. Helmsley Charitable Trust is supporting a series of trainings for teachers in both the Smarter Balanced and PARCC suite of assessments.

As they watched the English/language arts lesson in Massachusetts, the teachers here considered whether the video would be a helpful resource to them and their peers as they shape their own lessons and try to use "formative-assessment practice" to sense how well students are learning.

For a unit about the importance of reading, the Massachusetts teacher's students had read *Fahrenheit 451*, along with an informational text about improving teenage literacy in New York City.

In the video, the teacher engages her students in discussion about the texts and



"The formative stuff is what goes on in the classroom; that's the stuff teachers need to know the most about."

KAREN LOMBARDI

Literacy coach, New Haven, Conn.

presses them to support their ideas with evidence from what they read. She discusses her thinking about how she structured the lesson.

'Rich Discussion'

Afterward, one teacher attending the training remarked that she would like to have seen more depth in the student discussion and a more detailed use of the texts. Another said she didn't think the lesson reflected the teacher's stated learning goals. Several teachers remarked that they thought the video showed effective formative-assessment practice, since it appeared that the students clearly understood what they were expected to learn from the lesson and could articulate how well they had done with it.

Chrys V. Mursky, Smarter Balanced's direc-

tor of professional learning, who facilitated the session, told the teachers that discussing what to include in the digital library can double as professional development, since it generates "such rich discussion."

The training served as a tutorial for the summative part of the Smarter Balanced system. It also oriented the attendees to the interim tests that can be built from nonsecure items in the digital library to measure student learning at key points of instruction, and the formative-assessment strategies that are intended to help teachers gauge learning and adjust instruction as it's happening.

Many teachers who attended the training knew only about Smarter Balanced's year-end tests; the interim and formative tools came as a surprise.

Stephanie Cotterill, a 6th grade English/language arts teacher from Shenandoah Junction, W.Va., said she had "no clue" about the nonsummative resources and was "happily surprised."

Many of the teachers said they placed far more value on the interim and formative resources than on the information the summative test will provide.

"The formative stuff is what goes on in the classroom; that's the stuff teachers need to know the most about," said Karen Lombardi, a literacy coach from New Haven, Conn.

Test Costs

Ms. Cotterill said that while a year-end test can help her plan for the following year, the interim and formative pieces can help her gear her teaching to her students' needs in real time.

Whether the teachers get access to those resources, however, is an open question at the moment. The 23 states that belong to Smarter Balanced have two pricing options: \$22 per student for only the summative piece of the test and \$27 per student for all pieces, including the digital library with its interim tests and formative tools.

States have not formally signed up for one or the other yet but are expected to do so in the next few months, said Jacqueline King, a consortium spokeswoman. A recent informal poll showed that nearly all Smarter Balanced member-states hoped to buy the complete package, she said. Many teachers at

the training asked whether a school district could opt for the full suite of tests even if its state had not done so, but Ms. King said that isn't an option.

Showing Mastery

Teachers attending the training found themselves in a mini-seminar on formative assessment itself. Some teachers were unclear about the distinction between interim assessment and formative assessment, for instance.

But while many educators think of formative assessment as a pop quiz or other quick method of detecting student progress, experts urge teachers to imagine it more broadly as a range of carefully thought-out practices that engage students in a “feed-back loop.” Teachers get a nuanced sense of how students are learning, and students get a clearer sense of what they’re aiming for and what they need to do to get there.

To engage in sound formative-assessment practice, teachers need to keep four things in mind, Ms. Mursky said: clearly laying out what they want students to learn, eliciting evidence of that learning, interpreting that evidence, and then acting on the evidence to adjust their teaching.

Without the clear articulation of what students must do to show mastery, they can't give students solid “actionable feedback” so they know how to move forward, said Ruth McKenna, a facilitator for WestEd, a San Francisco-based research group that works with Smarter Balanced.

That was the lens on formative assessment the teachers sought to learn at the training, so they could apply it to materials they would create, or review, for the digital library.

Resources submitted to the library are evaluated by the “ambassador” teachers, as well as by teams of Smarter Balanced teachers who are serving as consortium experts in their home states. The ultimate decision about which resources will be included in the library will be made by “state leadership teams” in each state, made up of educators from K-12 and higher education, consortium officials said. Some resources in the library will be teacher-created, and others will be commissioned from a vendor, they said.

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COMMENTARY

Making Grading Personal, and More Enjoyable

By Marie Levey-Pabst

Every teacher knows the scene: the endless stack of papers, the empty gradebook columns staring you in the face, and the large cup of coffee ready to get you through the night.

Like most English teachers, I've been faced with a pile of essays that are riddled with repetitive thesis statements, quotes from Sparknotes, and inventive spelling. I know the pain of spending hours writing margin comments, as well as a short paragraph at the end of each essay, only to see half of them in the trash bin the same day I return them. I knew there had to be a better way, but it took me years to develop a system that made grading manageable, even (gasp!) enjoyable, and ultimately a tool for learning.

The answer to my grading woes was found in a deeper understanding of formative assessment. In their fascinating 2009 study “Developing the Theory of Formative Assessment,” education professors Paul Black and Dylan Wiliam defined formative assessment this way:

“Practice in a classroom is formative to the extent that evidence about student achievement is *elicited, interpreted, and used by teachers, learners, or their peers, to make decisions about the next steps in instruction* that are likely to be better, or better founded, than the decisions they would have taken in the absence of the evidence that was elicited.” (emphasis added)

On the surface, this definition may seem simple: Assessment practice is formative when it is used to inform instruction. Teachers do this kind of assessment every day when they gauge student reactions, hold one-on-one conferences, or respond to “exit tickets” in the next day's instruction. In fact, this kind of routine formative assessment is one of the best tools for personalizing learning since it allows teachers to respond to individual student needs.

But what I wanted was to extend the bene-

fits of that regular, informal formative assessment to the assessments that have traditionally been summative. I wanted to make the students' persuasive essays, their end-of-unit responses to literature, truly formative.

In practice, making traditional assessments formative for both teachers and learners was complex. But after much trial and error, I developed a system that turns these major assessments into more authentic tools for learning by using the same three elements that make informal formative assessment so effective:

- providing timely and effective feedback;
- providing opportunities for students to revise and improve their work; and
- pursuing information that informs my instruction.

Considering these elements led me to a method of personalizing learning through the use of a portfolio system.

Providing Feedback

Using portfolios in an English class is not a new concept. In my portfolio system, I have combined ideas from a variety of excellent educators, including Bruce Penniman, Penny Kittle, and my own colleagues. I built this system on the three key elements of formative assessment, as well as an awareness that I needed to keep the acts of both providing feedback and grading work manageable.

Within a unit my students read at least one whole-class text, as well as one independent reading book. Additionally, they write one or two longer pieces about topics related to their lives, such as an op-ed about bullying, or an informational text that gives other teens advice about relationships. Every week students have a few written assignments due. Sometimes they are analytical responses to specific passages from a text, usually about a half page long. Sometimes they turn in drafts of their writing assignments. Every week their work is due on a Thursday night. My job is to provide timely and effective feedback

on these items.

Over the next three or four days I read and comment on their work—but without grading it. This might sound tedious at first, but I have found that I am able to do this quickly. I work hard to give effective feedback and look for information that informs my instruction. As I read and leave thoughtful comments on their work, I take note of patterns I see. I pay attention to what students are understanding, what they are misunderstanding, and what they are missing altogether, and how these understandings and misunderstandings might vary between different classes.

The patterns I see inform my instruction for the next week. For example, when I see my A block struggling to use evidence from the text I model that for them the next day. When I notice my C block spending a lot of energy developing a “hook,” but not developing their arguments, I plan an outlining activity for them. As I read and comment, I also make notes about which students I will conference with during class. I make a point to meet with those students who I noticed were struggling the most in their weekly assignments, as well as those that are ready to move ahead.

I’m able to plan personalized learning opportunities, and provide useful feedback, in large part because I am not actually grading their work. I’m not spending time and mental energy on using a rubric to calculate a grade. Instead these weekly assignments are opportunities for me to give students timely and effective feedback and get information that will inform my instruction.

Learning Through Revision

Of course, students then need an opportunity to improve their work. Why else would I spend time commenting on it? That’s where the portfolio comes in. At the end of the unit, I ask students to select three pieces of work to put into their portfolios. This is the part of the assessment system that provides opportunities for students to improve and takes advantage of the fact that much of their learning happens through the revision process. Up until this point, students have been producing work in a low-stakes environment. The only grades they have received are completion grades: They get a “complete” if they turn their work in along the way, even if the work would score poorly on the rubric. This helps students take risks in their writing, share their nascent thinking, play around with ways to organize their writing, and get feedback that will help them improve instead of a low grade that can sap their motivation.

My students then spend “portfolio week” pouring over comments, conferencing with their peers and me, and revising and editing their work until it is the best it can be. Then

they turn in this work as a final portfolio. This is where “traditional” grading comes in. I use rubrics to score their portfolio work, but at this stage of the process I don’t provide extensive feedback. Students get a score on the rubric, which aligns with a letter grade and little to no comments. This allows me to score all of their portfolios over three days, since just scoring and recording a grade is much simpler than scoring, recording, and giving feedback. Essentially, this portfolio is where I find out if students met the learning targets I have set through objectives.

However, that isn’t the full story. If a student’s work is seriously below expectations, or if they are struggling with basic conventions errors (misspelling, incomplete or run-on sentences, etc.), I will leave some comments to help them improve. After portfolios are returned, students have three days to do additional revisions and resubmissions. This is where I can hold students accountable for those conventions errors that are the bane of English teachers everywhere. A student might have written a brilliant analysis, but if she has run-on sentences or misused apostrophes, she must revise and resubmit. Additionally, a student who is still struggling to meet expectations in other ways also has another opportunity to revise and learn this skill. Students can then re-submit their work for one final round of grading to see if they met expectations for both content and conventions.

Reconceptualizing Assessment

When I first started using this portfolio-assessment system, complete with low-stakes reading response and writing along the way, it dramatically improved my grading life. I probably spend about the same total amount of time grading as I used to, but the “grading” I’m now doing is actually effective. Gone are the days of writing extensive comments on papers that would end up in the trash five minutes after I returned it.

Instead, I now spend time giving actionable feedback that helps my students learn and helps me teach effectively. Students don’t dump their papers in the trash anymore because they know they will need to revise their work based on my comments in order to do well on their portfolios. This also means I get to have rich conferences with students based on the feedback I’ve given, which is vastly improved from the days where I gave comments and just crossed my fingers that some of them would sink in.

In order to make this feedback and grading system manageable, I’ve consolidated a lot of grading time into the weekend between “portfolio week” and “revise and resubmit week.” While it is a busy weekend, I find it much more effective than spending several hours

over many weekends grading papers that did little to support learning.

Most importantly, this system has helped me personalize learning while teaching a large number of students. Giving feedback on low-stakes writing has allowed me to focus my attention on individual student’s needs, instead of worrying about how to give them a score. Armed with the knowledge I gained from giving feedback, I have been able to differentiate instruction as well as use individual conferences with students more effectively. Even more exciting, giving opportunities for students to revise and improve through the portfolio process means that they can learn through assessment, not simply be judged by it.

What I have learned through the development and implementation of this portfolio process is that traditional summative assessments can be a tool for learning, not just to show the result of learning. However, in order to make this concept a reality in my classroom, I had to drastically change both how my students and I understood assessment.

Every year it takes at least one unit for my students to figure out how the portfolio system works, and how it allows them to take risks in their thinking and writing. However, once they do, it is magical. They start responding to my comments, or asking me to clarify them, instead of simply looking for their score. They can see their growth across time and explain how they have improved their analysis or writing since the beginning of the year. They learn that “silly” grammar mistakes matter, and that they must meet certain standards in order to receive a grade. But most importantly they learn through the assessment system. And I’m happy to say that, when assessment is a tool for learning, the stacks of grading don’t seem as daunting anymore.

Marie Levey-Pabst is a National Board-certified teacher and Teach For America alum who has been teaching for 10 years. She currently teaches 10th grade English/language arts at Boston Community Leadership Academy, and previously taught at Oakland High School in California. She blogs at The English Teachin’ Vegan and can be found on Twitter at @MarieLeveyPabst.

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COMMENTARY

Formative Assessments Are 'Powerful'

By Larry Ferlazzo

What are effective formative assessment techniques?

Formative assessment is a critical element in an effective classroom, and is also a buzzword that is often misused.

Jennifer Serravallo, Andrew Miller, Daniel R. Venables, Brady E. Venables, and Larry Ainsworth are today's contributors.

Before I turn this column over to my guests, I'd like to share a few comments of my own.

Formative assessment is done during the instructional process, as opposed to a summative assessment, which is done at its end. It's ongoing, and is used by both teachers and students to evaluate evidence so that teachers can make adjustments to their teaching and students to their learning. It's a critical way for teachers to check students' understanding and then use the information to guide instruction.

Formative assessment can be almost anything—teacher observations; review of student work; a quick ungraded quiz; checking for understanding by asking students to give a thumbs-up, thumbs—up or thumb sideways (always with a teacher statement saying that it's fine for students to not put their thumbs up); asking students to quickly answer one-to-three key questions as an ungraded "exit slip" to give you on their way out the door (those questions include "On a scale of one-to-five, with one being no confidence at all and five being you get everything we covered today, how would you rate your level of understanding?"; "What questions do you have about what we covered today?"; "Can you please summarize in one-to-three sentences the major point of the lesson today?").

Now, to today's contributors:

RESPONSE FROM JENNIFER SERRAVALLO

Jennifer Serravallo is a literacy consultant and frequent speaker at national conferences. For years she was a classroom teacher in New

York City until she becoming a Senior Staff Developer at the Teachers College Reading and Writing Project at Columbia University. She is the author of numerous resources for teachers on reading assessment and instruction, including the AEP award winning Independent Reading Assessment (Scholastic Inc.) for fiction and nonfiction, and the Literacy Teacher's Playbooks for grades K-2 and 3-6 (Heinemann):

Formative assessments are critical in helping teachers uncover strengths and next steps for each student to power individual, small group, and whole class instruction.

Formative assessments are powerful when they:

1. Match what you want your students to do. For instance, when you want to find out how kids make meaning in a whole book, have them read a whole book with questions pre-planted on sticky notes inside the book. Ask students to respond in writing to your questions and use what they write to identify next steps.

2. Are evaluated. Assessments should be analyzed to help teachers notice strengths and teaching opportunities. After a teacher evaluates an assessment, it's also helpful to allow the child an opportunity to evaluate their own work, reflect on their experience, and even articulate the goal themselves. This goal can then be the focus of the individualized, personalized instruction that occurs during conferring and small group lessons, and class trends can help inform whole group instruction.

3. Honor, not detract, from instructional time. Formative assessments should be quick for the teacher to administer, or something students can complete independently. Evaluations of student assessments can be done later by the teacher, not during valuable class time.

4. Foster teacher collaboration. Collaboration among teachers will lead to consistency to each student's experience. There is real power in teachers coming together during common planning, PLCs, or staff meetings to develop rubrics or work off existing rubrics.

RESPONSE FROM ANDREW MILLER

Andrew Miller is on the faculty for the Buck Institute for Education and ASCD, and is a regular blogger with ASCD and Edutopia.

Doug Fisher and Nancy Frey have some of the best books and resources surrounding formative assessment. One of the key pieces that's often overlooked in formative assessment is to know exactly what you are assessing. Teachers often say they are checking in with students, and that checking in needs to be just as intentional as the purpose of the lesson. This is often called "feed up." If you know you are assessing, then you are halfway there.

The other key is to know that formative assessment can look and sound different. While a draft or written product is an excellent formative assessment, so are questioning techniques to probe student thinking. In the midst of a lesson, teachers can move around the room during collaborative work or independent practice to probe student thinking with questions. Teachers can use the great tools they have, from graphic organizers and technology to spoken responses and project products to assess student learning along the way.

Teachers should also know the difference between a mistake and an error, and see which is present if they spot an issue. A mistake means that cognitively the student may know the process, content or skill, but may have made a mistake while doing it. An error, on the other hand, implies that there is a lapse in student thinking, process, and content. Each has an implication for instruction.

Finally, teachers can conduct error analysis of student work and formative assessments in the midst of a unit. In an error analysis, a teacher uses student work aligned to standards to examine trends and patterns in student understanding. This can lead teachers to see the need for small group or individual intervention. It might also lead to a teacher needing to re-teach content or skills so all students are successful. This is called the "feed forward" process where formative assessments are used to

drive instruction, instead of simply assessing learning.

One last piece to understand is that an assessment is not summative until the teacher or student decides it is. There is a strange phenomenon that when we name an assessment as summative it always must be. Not true! In fact, teachers and students can use assessments as tools for learning, and use them to decide whether or not it is a time to evaluate the learning, or to inform it. With these tools, teachers can use formative assessment to reflect on their practice and ensure they do their best to meet the needs of all students.

RESPONSE FROM DANIEL R. VENABLES & BRADY E. VENABLES

Daniel R. Venables is an educational consultant and Founding Director of the Center for Authentic PLCs, an independent consulting firm committed to assisting schools in implementing, developing, leading, and sustaining authentic PLCs. He is the author of How Teachers Can Turn Data Into Action (ASCD, 2014), and The Practice of Authentic PLCs: A Guide to Effective Teacher Teams (Corwin, 2011).

Brady E. Venables is Instructional Technology Coach for Saluda County Schools in Saluda, SC whose innovative and engaging instructional strategies consistently result in high achievement in her students across a wide range of ability levels.

In a recent blog post on TeachThought, I discussed sources of formative assessment data that is readily available to teachers in the classroom. Most of these translate into strategies for teachers to use in formatively assessing their students during instruction. A quick recap:

Checks-for-Understanding

Every time teachers ask their class a question during instruction, they receive data about where their students are in their learning. But sometimes, the same three or four students answer all of the questions (and are usually right). This can produce skewed data that does not represent the class's mastery as a whole.

To lessen this effect, many teachers have students respond to global questions using individual student whiteboards, allowing teachers to quickly assess the progress of all students during instruction. Other teachers have students place Post-Its™ or magnets on large charts or graphs indicating their understanding or allow them to ask anonymous questions about the content. Using electronic devices, such as clickers, iPads, and even cell phone polls to measure student understanding is particularly effective (and engaging for students). We discuss specific

apps/websites to do this in more detail below.

Student Self-Assessments

Occasionally during instruction, teachers can poll students to see where they think they are in their understanding, particularly during more complex content instruction. To do this, I prefer heads-down voting so students feel safe to respond honestly and unpressured to vote as their classmates are voting. Heads-down voting involves a show of fingers using the following scale (which I leave on a poster in the classroom):

- 1 = Totally confused.
- 2 = Shaky on this.
- 3 = I think I get this.
- 4 = Got it. Let's move on.

Tickets-Out-The-Door (Exit Slips)

Many teachers commonly close their lesson with an exit slip for students to answer. These are typically short questions that reflect the content of that day's lesson. Sometimes the question prompt has to do with how students feel about the material. In either case, a thoughtfully crafted question for a ticket-out-the-door provides teachers with a brief check for understanding. The teacher can review these quickly, and useful information can be gleaned about what students really got out of that class. It's a great way to stack the deck in your favor for tomorrow's lesson.

My wife is a high school biology teacher who uses a variety of teacher-friendly formative assessment strategies in the digital realm. While the two of us may be a bit old-school meets new-school in our methods, on this we agree: one characteristic that separates good teaching from masterful teaching is the teacher's routine use of formative assessment techniques that are embedded in every lesson.

We also agree that, in order to keep today's students meaningfully engaged as we assess their understanding in our classrooms, we must hit them how they're wired: technologically. Not only are the following tech-based methods of formative assessment engaging to the students, but they are uniquely effective for the teacher. Some of the apps generate live spreadsheets and graphs that inform the teacher of student understanding in real time.

Socrative

Teachers generate multiple choice or free response quizzes that students can take via cell phone, computers, or tablet. Graphs of student responses can be automatically generated, instantly.

Infuselearning

Similar to socrative with slightly different features and teacher tools.

Educanon

Teachers can have students view short video lessons and answer questions as they interact with the video. This allows for engaging, constant formative assessment in a technical lesson.

Padlet

Students log into a classroom digital notebook to respond to a prompt or an essential question. Their responses are akin to Post-Its™ added to a "pad" on which students can see their peers' responses and build off each other's ideas in real time.

Popplet

Students construct mind maps to connect ideas across disciplines or standards. Teachers can monitor and add to the connections students are able to make.

However teachers choose to formatively assess student understanding in real time during instruction, the most important point is that they do it some way, using any of the analog or digital strategies we've tried to highlight here.

RESPONSE FROM LARRY AINSWORTH

Larry Ainsworth is an education consultant who has authored 15 published books on best practices related to standards, assessment, curriculum, and instruction. His latest book, Common Formative Assessments 2.0: How Teacher Teams "Build the Highway" to Aligned Assessments, will be published by Corwin in December.

Formative assessments for learning are essential to improving the effectiveness of teaching and to meeting the diverse learning needs of all students.

Recently published educational research continues to underscore the effects that formative assessment, when effectively implemented, can have on raising student achievement levels. In *Visible Learning* (2009), world-renowned educational researcher John Hattie explains that any professional practice that can achieve a 0.40 effect size equates to approximately one year of growth in student learning. Formative evaluation ranks #4 among all positive influences on student learning, producing an overall effect size of 0.90—equivalent to over two years of student gains within a single academic school year. The effective use of feedback ranks #10 with an effect size of 0.73 and an almost similar result—almost two years of student growth.

One of the most effective ways educators can use formative assessments is by collaboratively creating common formative assessments with grade-level or course-level colleagues. Common formative assessments

(CFAs) are aligned pre-and post-assessments for learning that are designed by a grade-level or course-level team of educators to assess student understanding of the particular learning intentions and success criteria currently in focus within a curricular unit of study.

CFAs afford teacher teams a clear lens through which to see their instructional impact on student learning. The assessment questions directly match the levels of cognitive rigor within the unit learning intentions (derived from standards or learning outcomes). Accompanying success criteria describe explicitly what students are to demonstrate in their assessment responses to show they have achieved the learning intentions. Knowing what they are to learn and how their understanding will be evaluated, students are empowered to take a more active role in their own learning.

Common formative assessments are a great way for educators and students to receive and utilize resulting feedback to correctly interpret student understanding and adjust instruction accordingly. The inferences educators make about student learning can only be as good as the evidence they collect. And that evidence is only as good as the source from which it comes. Understanding this, teacher teams strive to ensure their assessment questions are of high quality.

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