

Educational Leadership

December 2007/January 2008 | Volume 65 | Number 4

Informative Assessment Pages 36-42

Changing Classroom Practice

Meeting regularly in teacher learning communities is one of the best ways for teachers to develop their skill in using formative assessment.

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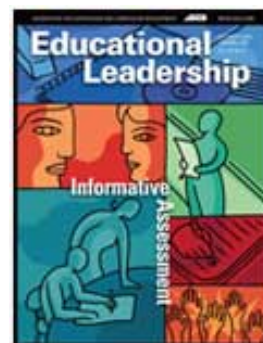
Today's schools face unprecedented challenges in preparing students for the unpredictable demands of the future workplace. In an effort to meet these challenges, a number of policy reforms have focused on raising student achievement. Some (for example, No Child Left Behind) have depended primarily on sanctions, leaving schools and districts to find solutions for themselves. Others have involved curriculum changes, increased use of information technology, or changes in the way schools are governed or organized (for example, charter schools or high school redesign).

The evidence to date is that none of these initiatives has had a large effect. When you control for the demographics of student populations, the net impact on student achievement appears to be effectively zero (Wiliam, 2007).

Thus, it's hardly surprising that there has been considerable interest in one development that does have a solid body of research showing its effect on student achievement—formative assessment. Five reviews of the research in this area (Black & Wiliam, 1998; Crooks, 1988; Kluger & DeNisi, 1996; Natriello, 1987; Nyquist, 2003) synthesized a total of more than 4,000 research studies undertaken during the last 40 years. The conclusion was clear: When implemented well, formative assessment can effectively double the speed of student learning (Wiliam, 2007).

What happened in response to these findings was predictable. A number of publishers started putting the label "formative" on any assessment that was designed to be administered more often than once a year. Such a label may be legitimate if the assessment is used to shape instruction. For example, the results of standards-based tests might show that teachers are paying too much attention to one standard and not enough to another, allowing the teachers to adjust the curriculum. Or the assessments might indicate that certain students are not making enough progress to reach proficiency on the state test, enabling the school to provide extra instruction for these students.

It is *not* legitimate, however, to claim that the existing research indicates that such use of standardized benchmark assessments will raise student achievement (Shepard, 2007). Almost



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all the research reviewed in the five studies mentioned focused on short- and medium-cycle formative assessment, in which the length of the feedback cycle was minutes, hours, or days rather than the weeks or months most commercially available assessments require. Although common assessments, benchmark assessments, interim assessments, and the like play an important role in monitoring student progress and providing system-level information for policymakers, there is no evidence at this time that such assessments increase student achievement (Popham, 2006). Instead of putting their faith in such solutions, schools need to implement the kind of formative assessment that research clearly supports.

The Right Stuff: Effective Formative Assessment

In an article in *Educational Leadership* two years ago, I and some of my colleagues at Educational Testing Service's Learning and Teaching Research Center laid out five nonnegotiable components of an effective formative assessment system (Leahy, Lyon, Thompson, & Wiliam, 2005). To tap the full potential of formative assessments, teachers must

- *Clarify and share learning intentions and criteria for success with students.* For example, some teachers share work samples completed by previous students and have current students discuss which ones are strong and which are weak, and why.
- *Engineer effective classroom discussions, questions, and learning tasks.* Well-planned questions can prompt students to think and provide teachers with information to adjust instruction. Teachers need to use effective questioning techniques that keep all students engaged and that gauge the understanding of the whole class instead of just selected students.
- *Provide feedback that moves learners forward.* Comments that address what the student needs to do to improve, linked to rubrics when appropriate, promote further learning more effectively than letter grades do.
- *Activate students as the owners of their own learning.* For example, have students assess their own work, using agreed-on criteria for success.
- *Encourage students to be instructional resources for one another.* Peer assessment and feedback is often more acceptable and engaging for students than teacher feedback is.

Since we wrote that article, we have worked with hundreds of schools across the United States, and we have learned a great deal about the kinds of supports that are necessary for implementing effective formative assessment practices. In particular, we have learned that the necessary changes in classroom practice, although often apparently quite modest, are actually difficult to achieve.

For example, a few months ago, an elementary school teacher in northern New Jersey was telling me about her efforts to change her questioning techniques. She wanted to use popsicle sticks with students' names on them as a way of choosing students to answer her questions at random—a technique that increases student engagement and elicits answers from a broad range of students instead of just the usual suspects. However, she was having difficulty calling on specific students because she automatically started most questions with phrases like, "Does

anyone know ... ?" Frustrated, she wondered why she was finding this simple change so difficult. This teacher has been teaching for 25 years, and we worked out that, over her career, she has probably asked around half a million questions. When you've done something one way half a million times, doing it another way is going to be pretty difficult!

That's the bad news. The good news is that, if a school understands just how hard effective formative assessment is to implement and puts the right supports in place, the necessary changes are achievable in every classroom. But to bring these changes about, schools need to make sustained investments in a new kind of teacher professional development.

Beyond Traditional Professional Development

A football coach who coached quarterbacks by merely having them read books, watch videotapes of games, and listen to presentations from various experts would probably not last long in the job. These practices have a role to play, of course—but ultimately, success in quarterbacking is about being able to execute the plays.

Knowing that is different from *knowing how*. But in the model of learning that dominates teacher professional development (as well as most formal education), we assume that if we teach the *knowing that*, then the *knowing how* will follow. We assemble teachers in rooms and bring in experts to explain what needs to change—and then we're disappointed when such events have little or no effect on teachers' practice. This professional development model assumes that what teachers lack is knowledge. For the most part, this is simply not the case. The last 30 years have shown conclusively that you can change teachers' thinking about something without changing what those teachers do in classrooms.

For example, Mary Budd Rowe (1974) found that the wait time that teachers allowed after asking a question was frequently less than a second, leaving students with no time to think. Subsequent work by Kenneth Tobin (1984) showed that increasing this wait time to three to five seconds improved student achievement. So all we need to do is tell teachers about these findings and their students' scores will rise, right? Wrong! Most teachers have heard about the research on wait time, but they still allow less than a second for students to respond. Knowing what to do is the easy part. Actually doing it is what's hard.

If we want to change what teachers do in classrooms, then we need to focus on those actions directly. As Millard Fuller, founder of Habitat for Humanity, has said, "It is generally easier to get people to act their way into a new way of thinking than it is to get them to think their way into a new way of acting."

Aside from individual coaching for every teacher, which would be beyond the budgets of most schools, the most promising approach we have found for focusing on teacher actions is *teacher learning communities*. In these small, building-based groups, each participating teacher develops a specific plan for what he or she wants to change in his or her classroom practice. The groups meet regularly to support team members in carrying out and refining their plans.

Of course, teacher learning communities are not the best model for all teacher professional development. For example, if a school wanted to increase teacher content knowledge, teacher

learning communities would be a bad idea; direct instruction would be much more successful. But teacher learning communities appear to be the most effective, practical method for changing day-to-day classroom practice.

Planning Teacher Learning Communities

During the last three years, my colleagues and I have explored a number of different models for teacher learning communities. Through these experiences, we developed and refined a model that appears to work well in a diverse range of settings. Here are our practical suggestions for setting up teacher learning communities to implement and sustain formative assessment.

Plan for the teacher learning community to run for at least two years. Don't treat formative assessment as just this year's quick fix. When conceived broadly, formative assessment provides a framework for a whole career's worth of professional development.

Start with volunteers. We've worked with volunteers and we've worked with conscripts—and trust us, volunteers are better. Formative assessment cuts across many established practices in school, and volunteers are far more likely than conscripts to find ways around the obstacles (see, for example, Clymer & Wiliam, 2006/2007). Working with volunteers, at least to start with, provides a beaten path that the less enthusiastic can follow. Formative assessment, like any reform, is a match you only get to strike once; make sure there's enough kindling to allow it to catch.

Meet monthly for at least 75 minutes. We've experimented with meetings at intervals of two, three, four, and six weeks. Monthly meetings offer the best compromise. Meetings every two or three weeks are too frequent; often the teachers have not had time to try out new ideas in their classrooms. On the other hand, when the meetings are six weeks apart, the program can lose momentum. To ensure time for all individuals to report back, the meetings need to last at least 75 minutes—ideally, two hours.

Aim for a group size of 8–10. When the group is too small, there are often not enough differences of opinion to provide for good teacher learning. When the group is too large, meeting time may run out before all members can talk about what they've been doing.

Try to group teachers with similar assignments. Teachers with a variety of assignments can provide a welcome degree of diversity, but the most productive discussions recognize the specificities of the subject or the maturity of the students. What makes a good question in math is different from what makes a good question in social studies, and what works for 5th graders may be inappropriate for 1st graders. So aim for teachers with similar grade assignments in elementary schools, and go for cognate areas (for example, math with science) in middle and high schools.

Establish building-based groups. Meeting with teachers from other schools is a good way to get new ideas, but teachers actually don't need a lot of new ideas. Instead, they need to take a small number of ideas and integrate them fully into their teaching. This requires support from a group of trusted colleagues. By all means, hold cross-building meetings in which teachers can

share with their colleagues in other schools, but remember that these are sources of information, not sources of change in teacher behavior. They are no substitute for building-based meetings.

Require teachers to make detailed, modest, individual action plans. At the first meeting, each teacher needs to make a specific plan about what he or she wants to change. The five principles of effective formative assessment (Leahy et al., 2005) can provide participants with some ideas.

Many teachers will want to try out lots of different ideas, but in our experience, teachers who attempt to change more than two or three things at a time invariably fail. Their classroom routines break down, and they go back to doing what they know how to do. Teachers who concentrate on making a small number of changes and on really integrating them into their practice make more progress. It is also important that teachers identify how they are going to make time for the new strategies—what they are going to do less of. For a list of questions that we've found useful in helping teachers develop their action plans, see Figure 1.

Figure 1. Creating an Action Plan

Teachers can use questions like these to format their own action plans. Sample teacher responses are in italics.

1. What is one thing that you will find easy to change? What difference do you expect it to make to your practice?
 - *Wait time/think time. I expect that allowing wait time will encourage my students to think and come up with their own ideas.*
 - *It should be easy to start using the green/red circles for students to signal whether they feel they have, or have not, understood something and the ABCDE cards for answering multiple-choice questions. I expect that these strategies will tell me more about student thinking.*
2. What is one thing that you would like to change that will require support? What help would you need?
 - *Comment-only grading. I would like to go to a standards-based, color-coded system. I would like to change our grading system because it would benefit the kids, but I would need the support of the senior management.*
3. What other changes would you like to make later on in the year? What help might you need?
 - *I would like to change the way I use peer assessments. (I don't use them at all now!) I'd like to start with this technique, but I will need some support.*

4. What will you do differently or stop doing to implement these changes?
- *I would like students to take more ownership of the quality of their work. To do this, I plan to have small groups of students do peer evaluations of sample student work, using mark schemes to score answers. To make time for this, I am going to have to cut back on the number of assignments I give and, more specifically, the number of assignments that I grade.*
 - *I am planning to grade differently, and this should take less time. I will try to grade papers so the students have to find their own mistakes as part of their work.*

Have a facilitator, but not a guru. Someone needs to be in charge to make sure the meetings happen, that there is a room available, that refreshments are provided, that the agenda is followed, and so on. But it is important not to set this person up as an "expert" whose job is to tell the rest of the group what to do. The idea of a teacher learning community is that each person comes with a clear idea about what they want help with, and the group helps that person with the task.

We call these meetings *teacher* learning communities rather than the more common *professional* learning communities because only those who are attempting to make changes in their own classroom practice can be full members of the group. Administrators and other education professionals can provide support and advocacy, and we've seen institutions in which they have made important contributions to a teacher learning community. But they need to be aware of the limitations of their role.

Meetings that Sustain Effective Formative Development

Although experienced and skilled facilitators can sometimes achieve great results with relatively unstructured meetings, it is not reasonable to expect individual teachers to be able to do this, at least not to begin with. For this reason, schools should provide a clear structure for each meeting of the teacher learning community. After exploring a number of formats for meetings, my colleagues and I have developed a five-part format that works successfully in a wide range of settings.

Introduction (5–10 minutes)

Participants agree on the aims of the meeting and get ready to focus on the agenda. For example, many groups have found that irrelevant issues were raised throughout the meeting; they discovered that they could ameliorate this habit by allowing each person a "one-minute whine" at the beginning of the meeting. Each participant has a maximum of one minute (rigorously enforced with a stopwatch) to sound off about all the irritating things about the school that cannot be changed.

How's It Going? (30–50 minutes)

This segment of the meeting is the "active ingredient"—the part that has the greatest influence on teacher practice—and so it must not be squeezed out if time is short. Each participant gives a summary of what he or she has tried to achieve in the previous month and receives support from the rest of the group in taking his or her plans forward. It's crucial that *everyone* report back at *every* meeting; this practice gives all participants an incentive to work on their plans so that they will have something to talk about. As one teacher recently told me,

Just the idea of sitting in a group, working out something, and making a commitment—I was impressed with how that actually made me do something different. (Ciofalo & Leahy, 2006)

At first, this part of the meeting often falls into polite serial turn-taking, along the lines of "Oh, that's nice. Who's next?" To avoid this and ensure that the meeting focuses rigorously on formative assessment, we've found it useful to provide teachers with a set of sample questions or probes. After each participant reports on trying a technique from her or his action plan, other group members might ask, How did it go? Was it successful or unsuccessful? What was formative about it?

If the technique was not successful, possible follow-up questions include, What do you think is getting in the way? What help do you need to make this work? How could this technique be modified to work for you? If someone planned to try a technique, but has not, suitable questions include, Why haven't you tried it yet? What modifications to the technique might make it more appealing for you to try out? What support would you need to try out this technique?

New Learning about Formative Assessment (25–40 minutes)

Since the first, second, fourth, and fifth segments are the same for each meeting, there is a danger that the meetings can become stale. To avoid this problem, the middle section of the meeting should be different each month, providing variety and a way of introducing new ideas to the group. The Keeping Learning on Track program at Educational Testing Service offers a carefully sequenced series of activities and facilitator's notes for a two-year, 16-meeting program. Other possibilities for this segment include watching and discussing a video of a teacher doing formative assessment, conducting a book study in which participants read a chapter of a book before each meeting and discuss it, or doing some kind of shared activity, such as grading student work in pairs to provide formative feedback.

Personal Action Planning (10–15 minutes)

Some participants may want to revise their action plan as a result of what they've heard, whereas others may be content to maintain their original focus. Either way, it is important for participants to have time to think through, in detail, what they plan to do during the coming month.

Review of the Meeting (5 minutes)

Finally, participants return to the original objectives of the meeting and check to see whether

they were achieved. If not, the group makes plans for how to ensure that the objectives are achieved during the coming month or at the next meeting.

Putting Teachers in Charge

Formative assessment has the power to produce unprecedented improvements in student achievement, but teachers need substantial support and guidance to integrate formative assessment into their practice. Teacher learning communities have the potential to provide such support while putting teachers back in the driver's seat, in charge of their own professional development. After exploring a range of models in dozens of school districts, my colleagues and I are confident that the practices discussed here provide a workable model that will enable any school to initiate and sustain teacher professional development focused on formative assessment.

References

- Black, P. J., & Wiliam, D. (1998). Assessment and classroom learning. *Assessment in Education: Principles, Policy and Practice*, 5(1), 7–73.
- Ciofalo, J. F., & Leahy, S. (2006, April). *Personal action plans: Helping to adapt and modify techniques*. Paper presented at the annual meeting of the American Educational Research Association. San Francisco.
- Clymer, J. B., & Wiliam, D. (2006/2007). Improving the way we grade science. *Educational Leadership*, 64(4), 36–42.
- Crooks, T. J. (1988). The impact of classroom evaluation practices on students. *Review of Educational Research*, 58(4), 438–481.
- Kluger, A. N., & DeNisi, A. (1996). The effects of feedback interventions on performance: A historical review, a meta-analysis, and a preliminary feedback intervention theory. *Psychological Bulletin*, 119(2), 254–284.
- Leahy, S., Lyon, C., Thompson, M., & Wiliam, D. (2005). Classroom assessment: Minute-by-minute and day-by-day. *Educational Leadership*, 63(3), 18–24.
- Natriello, G. (1987). The impact of evaluation processes on students. *Educational Psychologist*, 22(2), 155–175.
- Nyquist, J. B. (2003). *The benefits of reconstruing feedback as a larger system of formative assessment: A meta-analysis*. Unpublished master's thesis, Vanderbilt University, Nashville, TN.
- Popham, W. J. (2006). Phony formative assessments: Buyer beware! *Educational Leadership*, 64(3), 86–87.
- Rowe, M. B. (1974). Wait time and rewards as instructional variables, their influence in language, logic, and fate control: Part 1. Wait time. *Journal of Research in Science Teaching*, 11(2), 81–94.

Shepard, L. A. (2007). Formative assessment: Caveat emptor. In C. A. Dwyer (Ed.), *The future of assessment: Shaping teaching and learning* (pp. 279–303). Mahwah, NJ: Erlbaum.

Tobin, K. G. (1984, April). *Improving the quality of teacher and student discourse in middle school grades*. Paper presented at the annual meeting of the American Education Research Association, New Orleans, LA.

Wiliam, D. (2007). Content *then* process: Teacher learning communities in the service of formative assessment. In D. B. Reeves (Ed.), *Ahead of the curve: The power of assessment to transform teaching and learning* (pp. 183–204). Bloomington, IN: Solution Tree.

Author's Note: The Keeping Learning on Track team at Educational Testing Service—Joe Ciofalo, Laura Goe, Siobhan Leahy, Dawn Leusner, Christine Lyon, Marnie Thompson, Cindy Tocci, Dylan Wiliam, and Caroline Wylie—contributed to the content of this article. Keeping Learning on Track is a sustained, interactive professional development program that helps teachers adopt minute-to-minute and day-by-day assessment-for-learning strategies. It is the result of a three-year research and development process led by the author and ETS's Learning and Teaching Research Center. More information is available at www.ets.org/klt.

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Purpose: To allow all groups to respond to assessment data in a semianonymous way for brainstorming instructional next steps.

Time Allotted: Approximately 25 minutes

Supplies: Sticky notes, writing utensils, chart paper, markers

Roles: None

- Process:**
1. **3 minutes:** Give each person five sticky notes. Write a student learning issue that was identified through data analysis on a piece of chart paper. Ask participants to write down ideas for next steps that can be taken with instruction to address this learning need.
 2. **2 minutes:** Break the group into teams of four to six people. Give each team a piece of chart paper and a marker. Ask each team to write the student learning issue at the top of the chart paper.
 3. **10 minutes:** Tell the participants to place their sticky notes randomly on their team's chart paper. Then, tell them to group the notes into categories that make sense to them. It is okay for some notes to stand alone. If there is an idea that goes under more than one grouping, participants can duplicate the idea on another sticky note and include it in both categories.
 4. **5 minutes:** Tell teams to create a header for each category and write it on the chart paper. Larger categories can be divided into subcategories with subheadings.
 5. **5 minutes:** Have teams share their categories. If there is only one team, have team members prioritize which next steps would be most important.
Prompt participants to ask questions or make comments while teams are sharing categories to clarify understanding.
 6. Reflect on what was learned from this process. What can we do next?