Clarify and Share Intentions and Criteria

Low achievement is often the result of students failing to understand what teachers require of them (Black & Wiliam, 1998). Many teachers address this issue by posting the state standard or learning objective in a prominent place at the start of the lesson, but such an approach is rarely successful because the standards are not written in student-friendly language. *Additionally standards generally encompass many learning targets to be taught over the course of many lessons and thus don't help students focus in on a specific concept for learning.*

Teachers in our various projects have explored many ways of making their learning objectives and their criteria for success transparent to students. One common method involves circulating work samples, such as lab reports, that a previous year's class completed, in view of prompting a discussion about quality. Students decide which reports are good and analyze what's good about the good ones and what's lacking in the weaker ones. Teachers have also found that by choosing the samples carefully, they can tune the task to the capabilities of the class. Initially, a teacher might choose four or five samples at very different quality levels to get students to focus on broad criteria for quality. As students grow more skilled, however, teachers can challenge them with a number of samples of similar quality to force the students to become more critical and reflective.

Engineer Effective Classroom Discussion

Many teachers spend a considerable proportion of their instructional time in whole-class discussion or question- and-answer sessions, but these sessions tend to rehearse existing knowledge rather than create new knowledge for students. Moreover, teachers generally listen for the “correct” answer instead of listening for what they can learn about the students' thinking; as Davis (1997) says, they listen *evaluatively* rather than *interpretively*. The teachers with whom we have worked have tried to address this issue by asking students questions that either prompt students to think or provide teachers with information that they can use to adjust instruction to meet learning needs.

As a result of this focus, teachers have become aware of the need to carefully plan the questions that they use in class. Many of our teachers now spend more time planning instruction than grading student work, a practice that emphasizes the shift from quality control to quality assurance. By thinking more carefully about the questions they ask in class, teachers can check on students' understanding while the students are still in the class rather than after they have left, as is the case with grading.

Some questions are designed as “range- finding” questions to reveal what students know at the beginning of an instructional sequence.

Teachers can also use questions to check on student understanding before continuing the lesson. We call this a “hinge point” in the lesson because the lesson can go in different directions, depending on student responses.

The traditional model of classroom questioning presents two additional problems. The first is lack of engagement. If the classroom rule dictates that students raise their hands to answer questions, then students can disengage from the classroom by keeping their hands down. For this reason, many of our teachers have instituted the idea of “no hands up, except to ask a question.” The teacher can either decide whom to call on to answer a question or use some randomizing device, such as a beaker of Popsicle sticks with the students' names written on them. This way, all students know that they need to stay engaged because the teacher could call on any one of them.

The second problem with traditional questioning is that the teacher gets to hear only one student's thinking. To gauge the understanding of the whole class, the teacher needs to get responses from all the students in real time.

Provide Feedback That Moves Learners Forward

After the lesson, of course, comes grading. The problem with giving a student a grade and a supportive comment is that these practices don't cause further learning. Before they began thinking about assessment for learning, none of the teachers with whom we worked believed that their students spent as long considering teacher feedback as it had taken the teachers to provide that feedback. Indeed, the research shows that when students receive a grade and a comment, they ignore the comment (see Butler, 1988). The rst thing they look at is the grade, and the second thing they look at is their neighbor's grade.

To be effective, feedback needs to cause thinking. Grades don't do that. Scores don't do that. And comments like “Good job” don't do that either. What *does* cause thinking is a comment that addresses what the student needs to do to improve, linked to rubrics where appropriate. Of course, it's difficult to give insightful comments when the assignment asked for 20 calculations or 20 historical dates, but even in these cases, feedback can cause thinking. For example, one approach that many of our teachers have found productive is to say to a student, “Five of these 20 answers are incorrect. Find them and fix them!”

Once students have engaged in self-assessment and peer assessment, teachers are able to be more selective about which elements of student work they look at, and can focus on giving feedback that peers are unable to provide.

Activate Students as Owners of Their Learning

Developing assessment for learning in one's classroom involves altering the implicit contract between teacher and students by creating shared responsibility for learning. One simple technique is to distribute green and red “traffic light” cards, which students “ flash” to indicate their level of understanding (green = understand, red = don't understand). A teacher who uses this technique with her 9th grade algebra classes told us that one day she moved on too quickly, without scanning the students' cards. A student picked up her own card as well as her neighbors' cards, waved them in the air, and pointed at them wildly, with the red side facing the teacher. The teacher considered this ample proof that this student was taking ownership of her learning.

Students also take ownership of their learning when they assess their own work, using agreed-on criteria for success. Teachers can provide students with a rubric written in student-friendly language, or the class can develop the rubric with the teacher's guidance (for examples, see Black, Harrison, Lee, Marshall, & Wiliam, 2003). The teachers we have worked with report that students' self-assessments are generally accurate, and students say that assessing their own work helped them understand the material in a new way.

Activate Students as Instructional Resources for One Another

Getting students started with self-assessment can be challenging. Many teachers provide students with rubrics but nd that the students seem unable to use the rubrics to focus and improve their work. For many students, using a rubric to assess their own work is just too di cult. But as most teachers know, students from kindergarten to 12th grade are much better at spotting errors in other students' work than in their own work. For that reason, peer assessment and feedback can be an important part of effective instruction. Students who get feedback are not the only bene ciaries. Students who give feedback also bene t, sometimes more than the recipients. As they assess the work of a peer, they are forced to engage in understanding the rubric, but in the context of someone else's work, which is less emotionally charged. Also, students often communicate more effectively with one another than the teacher does, and the recipients of the feedback tend to be more engaged when the feedback comes from a peer. When the teacher gives feedback, students often just “sit there and take it” until the ordeal is over.

Using peer and self-assessment techniques frees up teacher time to plan better instruction or work more intensively with small groups of students. It's also a highly effective teaching strategy. One cautionary note is in order, however. In our view, students should not be giving another student a grade that will be reported to parents or administrators. Peer assessment should be focused on improvement, not on grading.

Using Evidence of Learning to Adapt Instruction

One final strategy binds the others together: Assessment information should be used to adapt instruction to meet student needs.

As teachers listen to student responses to a hinge-point question or note the prevalence of red or green cards, they can make on-the-fly decisions to review material or to pair up those who understand the concept with those who don't for some peer tutoring. Using the evidence they have elicited, teachers can make instructional decisions that they otherwise could not have made.

At the end of the lesson, many of the teachers with whom we work use “exit passes.” Students are given index cards and must turn in their responses to a question posed by the teacher before they can leave the classroom. Sometimes this will be a “big idea” question, to check on the students' grasp of the content of the lesson. At other times, it will be a range- finding question, to help the teacher judge where to begin the next day's instruction.

Teachers using assessment for learning continually look for ways in which they can generate evidence of student learning, and they use this evidence to adapt their instruction to better meet their students' learning needs. They share the responsibility for learning with the learners; students know that they are responsible for alerting the teacher when they do not understand. Teachers design their instruction to yield evidence about student achievement; for example, they carefully craft hinge-point questions to create “moments of contingency,” in which the direction of the instruction will depend on student responses. Teachers provide feedback that engages students, make time in class for students to work on improvement, and activate students as instructional resources for one another.