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ASSESSMENT FOR STUDENT LEARNING

The fourth broad dimension of instructional practice that experts observe for in classrooms is assessment for student learning. Expert observers pay attention to how teachers determine and help ensure student success through

- Assessments—ways teachers expect students to demonstrate learning in relation to the lesson objectives, specific content demands, and transferable skills
- Adjustments—instructional decisions or moves made in the moment to better support student learning based on evidence of progress gleaned during the course of the lesson

Assessment

Planful assessment of student learning feeds information back to the instructional process and allows teachers the opportunity to refine and redirect strategies for improving learning. Danielson (1996) posits that assessments should be congruent with the instructional goals, have clear criteria and standards, and be used in planning the next steps of instruction. Expert observers should analyze how the classroom teacher uses multiple forms of assessment to understand the learning of each student within the observed lesson and over time. Our expert panelists made clear their emphasis on assessment of learning, raising questions for focus in observations such as "How does the teacher gather information about student learning in the lesson?" and "How comprehensive are the data sources used to inform instruction and decision making?"

Expert observers also analyze the quality of assessment tools and strategies the teacher uses and how these inform lesson objectives and higher-level thinking skills. As Bransford, Brown, and Cocking (2000) note, "assessment should reflect the *quality* of students' thinking, as well as what specific content they have learned" (p. 244). Our expert panel pointed out that assessment should include a variety of tools and approaches to gather comprehensive and quality data and that these tools should include efforts to understand evidence such as anecdotal notes from student-teacher conferences and student work samples among other sources.

Expert observers also look for teacher decisions that are assessment driven and consider multiple ways teachers can help students to demonstrate and represent their learning in context. As Wiske (1998) suggests, experts ask "What might students do to develop and demonstrate their understanding?" (p. 73). Answering this question reminds teachers that students can undertake a much more varied range of activities as part of their schoolwork than is encompassed by typical assignments. Experts pay attention to what is guiding the teacher's assessment of student learning, for example, ways that assessment efforts connect to benchmark standards or reflect on professional development efforts to improve particular aspects of the teaching and learning process. This process is consistent with Saphier and Gower's (1997) notion that "the act of assessment should be an act of learning too" (p. 480). Connecting assessments to expectations for learning and then using this connection to drive changes in instruction completes the cycle of teaching and learning improvement. As Stigler and Hiebert (1999) note, "the true meaning of learning goals becomes

apparent only as teachers link them to assessments and weave them into a coherent curriculum and use them to guide their teaching decisions" (p. 142).

Beyond a focus on teacher decision making and instructional improvement, expert observers also analyze opportunities for student self-assessment and reflection in lesson observations, which is consistent with Wiske's (1998) notion that "teachers should encourage students to reflect on their learning by having a clear ongoing assessment plan" (p. 311).

Experts also pay attention to ways assessment(s) could be used for future planning and pose alternative methods or strategies for assessing learning based on knowledge of content and pedagogy and a vision for powerful instruction, about what is being assessed, how it is being assessed, and how evidence of student learning will be used to shape future teaching decisions.

Such a focus is consistent with the way Marzano, Pickering, and Pollock (2001) emphasize the importance of early planful assessment in the process of defining goals and expectations for student learning, noting that "at the beginning of each unit, one should define learning goals for the students. The middle of the unit will contain strategies for monitoring progress as

VISION OF HIGH-QUALITY INSTRUCTION RELATED TO *ASSESSMENT*

- Students are able to assess their own learning in relation to the teaching point.
- The teacher creates multiple assessment opportunities and expects all students to demonstrate learning.
- Assessment methods include a variety of tools and approaches to gather comprehensive and quality information about the learning styles and needs of each student (for example, anecdotal notes, conferring, student work samples, and so on).
- The teacher uses observable systems and routines for recording and using student assessment data (for example, charts, conferring records, portfolios, and rubrics).
- Assessment criteria, methods, and purposes are transparent and students have a role in their own assessment to promote learning.

well as introducing new knowledge. The end of the unit comes back to the learning goals, where teachers and students measure their success in meeting their goals" (p. 146).

Adjustments

Schmoker (2001) argues that there is a great value in brief and frequent assessments, both formal and in the moment, while teaching is in process. Clearly, creating and carrying out best-laid plans for assessing learning is critically important, yet we also agree with Danielson (1996) that "the most difficult [teaching] decisions have to do with adjusting a lesson plan in midstream, when it is apparent that such adjustments will improve students' experience" (p. 103). With regard to observing for adjustments in the moment during a lesson, an expert observer analyzes how teachers assess student learning—understandings, confusions, and so on—based on students' performance throughout the lesson.

These in-the-moment assessments should relate directly to progress made toward lesson objectives. As Wiske (1998) reminds us, "goals not only serve as endpoints, but as constant reminders during a lesson of how far the class still needs to go" (p. 138). Progress in the moment can be assessed in relation to specific content demands or in relation to helping students achieve and demonstrate transferable skills. In operationalizing the issues of in-the-moment assessment, our panel of experts raised questions such as "How does assessment inform the teacher's instruction right now as well as decisions about what to do next?" and "How does the teacher's understanding of each student as a learner inform how that teacher pushes for depth and stretches boundaries of student thinking?"

Recognizing the importance of adjusting instruction in the moment is only the first step. Expert observers also analyze how the teacher actually adjusts his or her own teaching based on evidence of student learning in the moment. Evidence of this can be observed in whether the teacher persists with premade plans in spite of evidence of student misunderstanding or confusion or chooses to modify both expectations and pedagogy based on evidence that students need more instruction on a key idea.

Part of this adjustment lies in the teacher's ability to diagnose the reasons why students may not be able to demonstrate understanding(s) and how the teacher responds. Expert observers pay attention to the ways in which teachers talk

about their decisions to adjust instruction post-lesson, and offer feedback that is sensitive to expressed teacher decisions and may raise questions about teacher decision making or pose alternatives grounded in evidence from the lesson.

Finally, expert observers of instruction are able to pose alternative ideas about both formal and in-the-moment assessments to help inform teaching decisions based on evidence from the observed lesson, knowledge of content and pedagogy, and a vision for the role of assessment in powerful instruction.

VISION OF HIGH-QUALITY INSTRUCTION RELATED TO *ADJUSTMENTS*

- The teacher plans instruction based on ongoing assessment and an understanding of students, standards, texts, tasks, and pedagogical content knowledge.
- The teacher makes in-the-moment instructional adjustments based on student understanding.

JACOB WHITE'S THIRD-GRADE MATHEMATICS CLASSROOM

As you enter the classroom and close the door quietly, thirty sets of eyes greet you. The students sit in five rows of six students each, all desks facing the front of the room. The students all turn back to face you with curiosity. The room is silent except for one boy who shouts, "Hi!" You nod at him and glance at the board in the front. Jacob White, a young third-year teacher from the local neighborhood, waves at you. He is holding a meter stick and is pointing at a large rectangle drawn on the board.

"Class? Eyes up here," he commands in a soft but certain voice and all students turn back to the front. "Like I was saying, what is the perimeter of this rectangle?" he asks the students, pointing at the sides of the shape. You notice that he also has written "Purpose = using toothpicks to find the perimeter of rectangles, pages 15–18, lesson five" in large print on the left side of the board above the daily schedule.

As you make your way into the classroom weaving through the rows of student desks you notice that students have their math textbooks open to a page entitled "Calculating Perimeter." They also have stacks of graph paper, pencils, and lots of toothpicks. Some of the toothpicks are broken and a few litter the floor. "What's *perimeter* mean?" one student whispers to the student next to her. Her neighbor appears to ignore the question or simply does not hear her. The girl looks down and moves her toothpicks into a triangle.

"OK, class. Who remembers how we learned to find perimeter?"

Three boys and a girl raise their hands instantly, then, noting each other, start shouting out their answers.

"You add up the sides!"

"You put your toothpicks there and count how many there are!"

"You plus the length and width!"

"You use a ruler!" Two students make this last comment in unison.

"OK! One at a time," interjects Jacob. "Hillary, would you come up and show us how you would find the perimeter of this rectangle?"

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Hillary nods and pushes back her chair. She is the student who had shouted about using toothpicks. She walks directly up her row to the white board. Most of the class looks at her. The other students who had shouted out answers look down at their desks and busy themselves with calculating the rectangle's perimeter on their own. When she gets to the front, Jacob taps her on the shoulder and shows her the pile of drinking straws on a rolling cart. "Pretend these straws are your toothpicks," Jacob instructs the class. He glances out at the students. "Tomas and Peter? Look up here!" he prompts two boys seated in the back. They had started whispering when Hillary picked up a straw.

Hillary silently stares at the giant rectangle on the board. She holds her straw up to the bottom of the rectangle. "One . . . " she counts aloud. She tries to hold that straw while picking up the next one and drops the first one. A student giggles. She tries again, this time dropping both straws and then stares at the floor.

"What should Hillary do now?" Jacob asks the class. A student shouts something that is hard to hear. No students seem to react to the inaudible answer. Jacob commands, "tell your partner what Hillary could do now to use the straws to find the perimeter of this rectangle. Make sure each partner talks. Start with the partner who is oldest first!"

The students turn to face the person who is sitting closest to them in the next row. The students in the fifth row turn to face the person either in front of or behind them. As soon as they are prompted, there is an animated buzz of young voices in the room. As you listen to the pair closest to you, you hear, "she should just hold the straw up there and mark where it ends!" Her partner replies, "I think she should forget the straws and use the ruler." Jacob shouts over the noise from his spot at the front of the room, "OK, next partner should be talking now!"

Another student near you says, "She should get Mr. White to hold the straw for her while she gets the new one." His partner replies, "I don't know what she should do." The boy squints at her and says, "She could also use the straws to measure one side and add it by two. Or she should just measure one side and times it by two."

"One–two–three eyes on me!" shouts Jacob over the din. The students stop talking on cue, turning to face him. "OK, I heard lots of

good ideas to help Hillary. Let's see some hands. Who has an idea?" Three students' hands shoot up.

"John?"

"She should just make a mark at the end of the straw. Then, she can move the straw and do it again," John replies.

Jacob responds, "Good. Who else has an idea? Jody?"

Jody replies, "She should just put a dot where the straw ends and then move the straw over."

"That's what I said," shouts John.

"I said it different," Jody adds quietly.

Before Jacob can respond, Hillary already has started using John and Jody's proposed strategy. She uses one straw to measure from the corner of the bottom of the rectangle, marking the end of the straw and then moving it over each time. Once she reaches the other side, she writes a big "7" at the bottom. Then, she starts using the straw to measure the height of the rectangle. "Watch Hillary now!" Jacob cuts in to interrupt the argument between John and Jody. Almost all of the students watch as Hillary writes "3" to indicate the height. She starts to repeat the process for the top of the rectangle.

"Wait!!!!" shouts John. "It's the same!!! You don't have to measure the top." There is a pause as the students all turn to look at their teacher.

Hillary freezes. Jacob White glances at John. "Hillary, John is right. You don't have to measure the top, too, because it's a rectangle. The top and bottom are the same, just like the two sides are the same. He takes the pen from Hillary and writes "7" on the top and "3" on the other side of the figure. "OK," Jacob says to the class, "thanks, Hillary, you did a nice job getting us started. Go and sit down." Hillary puts down the stack of straws and makes her way back to her seat. Her partner gives her a high five. The students clap for her as she sits down.

"Class," Jacob says, "we've been working on how to find perimeter. You have all the information you need now. Go ahead and practice your adding to find the perimeter of this shape. Remember to add all the numbers you see. Work by yourself this time."

The students stare at their graph paper and straws. Several students start scribbling numbers on their papers. A few students pick up their

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toothpicks. Jacob walks up and down the rows. He whispers to one student who sits with his head down, "go ahead and draw the rectangle just like it is up there . . . " The girl nearest to you is drawing tick marks on her paper and she counts each one. "14, 15, 16, 17 . . . " Her partner shouts at her, "this is easy! You don't have to write it out like that! Look, make tens!" You notice that the girl crouches closer to her paper to finish counting. Her partner shrugs and picks up a chapter book from his desk and starts reading it.

After about ten minutes of work time on this problem, Jacob returns to the front of the room. "OK, class, what is the perimeter of this rectangle? Hands please."

Almost all thirty students raise their hands. Jacob looks at Hillary, who is waving her hand triumphantly. "Yes, Hillary?"

"20! The answer is 20 straws!"

Jacob smiles at her and writes "P = 20" on the board. "Very good," he tells her. "Class, go ahead and do numbers one to fifteen in your book. You can use the strategy we learned together."

You stand up to exit the classroom, noticing that most students have shifted their attention to the textbook.
