



## Understanding and Rethinking Formative Assessment by Karen Wootton

I have an issue with pretests. Plenty of articles exist proclaiming the necessity, the usefulness, and the power of pretests, but I am just not buying it, and for several reasons. First, I remember my days in elementary school when all my teachers had decided they needed to give pretests. I hated taking a test where I really did not know the material, but what I found worse was when I “kind of” knew the material. I had an inkling of what the answer is, or maybe two choices (since they were often multiple choice) seemed reasonable, so I would guess. Invariably, I managed to do “okay” on these pretests, and my teachers had a false idea of what I knew. Pretest days became bad days for me.

Later, during my student teacher days, one of my master teachers used pretests regularly. One day, he started the class with a pretest on the upcoming probability unit. The students took the test, and since his room adjoined an office, he quickly ran the pretests through the scantron machine. The class had all done surprisingly well, so much so that he felt he could not do the lesson he had planned for the remainder of the class. He would be “wasting everyone’s time” he said. So he let the class sit and chat quietly. We could certainly debate the issue of what is actually “wasting time” in this situation, and certainly if the teacher had given the pretest at the end of the previous class, he would not have had this issue. But again, I was having that bad pretest feeling.

Yet, many times we hear formative assessment coupled with pretests. The idea that a teacher can give a pretest and then adjust a lesson based on the results is an appealing thought. One of my concerns is that the pretest’s effectiveness is only as good as the amount of effort the teacher puts into writing the pretest, scoring the pretest, and analyzing the data gathered. Using a generic multiple-choice pretest may not give the teacher accurate information on how much a student understands. Hence, we need to broaden our notion of what formative assessment is, and consider more useful tools than pretests.

Some prefer the term Assessment For Learning rather than formative assessment, and often these terms are used interchangeably. I recognize a difference with Assessment For Learning, or AFL, focusing on the student. AFL provides feedback not only to the teacher about the student’s progress and understanding, but also gives the student the information as well. So consider my not-so-favorite item, pretests. Does the teacher get information on what the students know? Yes. Well, maybe. Does the student gain information? Not right away. And, if the pretest is in a scantron format, receiving the score sheet the next day gives little help to the student in understanding what s/he knows. We need another method for providing feedback to all interested parties, students and teachers.

Consider a routine that becomes second nature to most CPM teachers: questioning. Let us further consider a lesson in Algebra Connections, where students are finding and stating a rule to represent growing tile patterns. As the teacher circulates through the room, s/he stops periodically to check in on



a team. The Suggested Lesson Activity provides sample questions for the teacher to pose: “What is the pattern (rule)?”, “How do you see it?”, and “How can you tell your pattern is correct?”, each to be followed up with a justification. We want teachers to ask the question of the whole group, and be cognizant of dominant students, but let’s suppose the question narrows in on one student. When the teacher asks the first question, “What is the pattern?” how will the student respond? The student could respond with a deer-in-the-headlights look accompanied by “uuuuhhhhh.” Has anyone gained any feedback? Yes, the teacher knows instantly that this student is not proficient on determining patterns. Does the student learn anything? Yes, the student, who might be feeling totally clueless, is learning “Here is a topic I don’t know! Help!”

Particular follow up questions will provide more information. Teacher: “Can you figure out the next value in the table?” Student: “Well, yeah, I can do that. You just add four.” Now the teacher discovers the situation is not so dire, and maybe the student just does not understand the notion of patterns. With the student’s response of “You just add four,” the teacher could say “Yes, ‘add four’ describes the pattern. How did you figure that out?” Now the student realizes that s/he in fact DID know the pattern, and understands that “the pattern” is what is done to produce the next term. The next question, “How did you figure that out?” provides more feedback. The student is thinking about the “how”, which causes him/her to consider the thought processes that produced the “add four” realization. “I noticed that all the other numbers were four apart,” the student might say. The gears are turning in both the teacher’s and the student’s brains, and connections are being made. This quick interchange between student and teacher gives both parties feedback on the learning that is taking place. It truly is an Assessment for Learning.

Another possibility is that after the initial question, the student responds with “The pattern is ‘add four’.” Good, the teacher thinks. The important question follows. The teacher asks “Why?” If we find another deer in the headlights, the teacher has to dig deeper. The student might be looking at his/her teammates, knowing one of them knows why, but s/he has not figured it out yet. The teacher might need to break the “why” question down: “Where does the ‘four’ come from?” Again, both student and teacher are gaining information on the learning that is taking place. The questioning is forcing the student to focus on the key components of the problem, and as the student thinks and formulates answers, s/he is recognizing gaps or making connections.

Not sure if you implement formative assessment regularly? Consider this: has this ever happened to you? A student calls you over, asks you a question, and as you are responding with another question, the student interrupts you with “Okay. I got it” and shoos you away. This is the perfect illustration of a good AFL or formative assessment! You received information based on the student’s question. That question pin-pointed what was confusing or not clear. Your response question gave the student just enough information to see where his/her confusion was, and cleared it up. Congratulations: learning has just occurred!



What about the opposite scenario? A student calls you over, asks you a question, and you respond with another question. The student makes no comment and continues to look at you or his/her paper. You ask another question, backing up a bit, and there is still no response. You have now learned that the student is more confused than just the initial question, and the student is realizing this as well. Both parties are realizing they need to back up further.

Chances are you have had experiences similar to one of these situations. If so, we can conclude that you do implement formative assessment. The next question: does everyone else recognize these scenarios as illustrations of formative assessment? Some administrators have flipped through a textbook, looking for those magic words, maybe expecting a tabbed section with blackline masters labeled “Formative Assessment,” and are not happy unless they see just that.

The issue is not whether or not CPM provides formative assessment, because it does. Just about every lesson provides sample questions that the teacher can use to determine the students’ level of understanding. These questions, as well as others that the teacher creates her/himself, provide feedback to the student, making the student think, and advancing the student’s understanding. This type of AFL is prevalent throughout the CPM courses. What really matters, though, is what the teacher and student do with that information. If a teacher finds herself with a deer in the headlights after asking a question, should the teacher walk away, rolling her eyes, and thinking “Okay, that student is going to fail!”? Of course not. That teacher needs to decide what she can do to ensure the student clears up the confusion and learns. The teacher can ask another question along with “Think about this, and when you have an answer or when you know what is keeping you from finding an answer, come talk to me,” putting the onus on the student, and allowing the teacher to question other students.

In most lessons, CPM offers sample questions to ask the students. Each question is a formative assessment. Extend your thoughts that formative assessments must be pretests, quizzes, exit slips, or other written or time-consuming assessments. Think of formative assessments as ways to provide information, or as a way to inform. Any time a teacher does anything that gives the students and the teacher information about learning and understanding, formative assessment has occurred.