

### **Traditional Assessment in the Classroom**

In Joel's chemistry class, he takes only one kind of assessment, a test or final project at the end of a unit of study. When his class studies chemical bonds, for example, he reads the assigned chapter, listens to lectures, watches relevant videos, answers questions, and performs laboratory experiments, all in preparation for the exam. The test cannot ask him about everything, so it will ask questions that sample his knowledge while Joel must study or memorize everything that might be on the test. Unfortunately, although Joe's teacher wants to improve students' higher-order thinking, it is likely that less than 10 percent of the test "will measure student performance above the level of simple recall" (Beyer, 1987, p. 218).

The students in Joel's class come with a variety of experiences with the topic. Some already understood much of the material and were ready for more in-depth study. Some may have never heard of the topic before and have been desperately trying to catch up through most of the unit. Nevertheless, beyond some superficial interaction with the teacher, every student receives the same instruction.

The students in the class approach an upcoming test from a variety of perspectives. Some students are excellent test-takers or good memorizers and know they have to do little preparation. Others go through severe anxiety attacks before tests even when they know the material thoroughly. Joel usually studies quite a bit, but he is still anxious and hopes he will do well on his exams.

On the day of the exam, the test, which has been kept secret, is administered, and students fill in the answer in absolute quiet. The teacher watches carefully to make sure that no students refer to their notes or ask classmates for help.

A few days after the exam, when the class has moved on to the conservation of matter which depends on understanding of previous topics, Joel receives his test back, with his answers checked right or wrong, his essay evaluated, and a grade assigned. Joel sees that he got a B+, breathes a sigh of relief and puts the test in the back of his notebook without looking at it any further. A few students discuss disputed items with the teacher. None of Joel's classmates use the exam as an opportunity to reflect on their learning, to look for gaps in understanding, or to set goals for future learning, even when the teacher was careful enough to make constructive comments throughout the test. Furthermore, Joel's teacher does not examine the test results systematically to collect information for future instruction because she is now busily working on the current unit.

This all-too-common method of assessment is efficient and familiar to most students, teachers, parents, and administrators, but it fails to provide teachers or students with the information they need to promote deep understanding of the subject.

Consider, on the other hand, the experiences of a student in a classroom where assessment occurs frequently for a variety of purposes.

### **Formative Assessment in the Classroom**

When Martha enters her chemistry class, her teacher conducts a large-class discussion on chemical bonding to determine what her students already know about the topic. She then assigns a lab investigation and observes students as they conduct their experiments, taking notes on their questions and discussions. The teacher notices that many of the students are not using the higher-order thinking skills of analysis and generalization as they draw conclusions from the experiment,

so she plans a lesson in which she teaches those skills directly. She observes their interactions after the instruction to determine if students understood the skills and are using them effectively.

When students write in their journals at the end of each day, the teacher reads through them, looking for areas of common understandings and misunderstandings, as well as concepts that are proving particularly difficult for individual and groups of students. She uses her findings to plan activities that will meet the needs of all her students.

As students progress through the unit, the teacher continually provides opportunities for them to think about their learning and to ask questions. She designs a performance task which requires students to show that they understand the concepts associated with the unit. Working with a small group, Martha will build a 3-dimensional computer model to illustrate chemical bonding. The teacher provides the group with a checklist to help them manage their time. She also makes a special point of taking observational notes about the students' collaboration skills. Martha and her group use a rubric describing the expected quality of the final project to monitor the quality of her work. When they receive a final assessment and grade for her project, they reflect on what they have learned and use that information to set goals for future learning.

In this classroom, assessment is integral to teaching and learning. The teacher assesses students while students assess each other and themselves. The focus in this classroom is not on getting grades, although grades are given; it is, rather, on learning and improving thinking.