

Measuring Academic Growth with Multiple Choice Assessments

As teachers, we use lots of informal methods to find out what our students know and don't know. During the year, a quick scan of a homework assignment, a quiz, or a student's confused look tells us when students need more instruction or practice.

When I started teaching I made tests at the end of a unit. After several years in the classroom, I realized it was much better to make an assessment before designing a teaching unit. Creating the unit test first meant I had identified key content knowledge and skills for the unit, ensuring I would make a thoughtful sequence of lessons with the final test in mind.

To my way of thinking, well-designed multiple-choice assessments should accurately measure student content knowledge in one moment, as well as skill growth over time.

It is also very useful to give formative assessments, sometimes called diagnostic assessments or pre-tests, in the first few weeks of school. These non-graded assessments at the beginning of the year help evaluate our students' skills and content knowledge.

There are different philosophies about formative assessments. One strategy is to administer a pre-test at the beginning of the year, giving the identical test questions at the end of a course. For example, our Senior Social Studies Team identified the core content knowledge that we hoped our students would know by the end of the year. We designed a US Government Formative Assessment with 25 questions. The average student score on the formative assessment was 52%. An item analysis of our pre-test results identified the most difficult topics for our students, including: adding Amendments to the US Constitution, the differences between the Senate and the House of Representatives, and the concept of federalism. Our team dug into designing lessons, emphasizing these aspects of US government. For the final exam, we gave students the identical questions and were pleased to see much improved test results.

A second approach to formative assessment is gauging skills. Several of us identified key political literacy competencies including: reading news articles and analyzing charts, infographics, electoral college maps, and political cartoons. We designed a US

Government - Formative Reading Skills Assessment. The assessment results guided our skill instruction. At the end of the semester we did not give students the same test questions. Rather, we created a Final Exam Reading Section, which mirrored the types of questions on the Formative Reading Skills Assessment, including charts, political cartoons and the like.

In my view, unit tests given throughout the year should test both content and skills, whether it is reading a non-fiction article or interpreting a map, graph or political cartoon. Since we teach these skills, we should adhere to the old adage, “Test what you teach.” For example, my Unit Test on the Westward Movement, Industrialization, Immigration and the Progressive Era 1865-1914 included an excerpt on the impact of railroads on Native Americans, a photo of child labor and New York tenements, a graph of US industrialization, and political cartoons on immigration and Teddy Roosevelt. It is not hard looking at this unit test to imagine the content I taught, along with the skills that we practiced.

Finally, be sure to give quizzes and lots of review before an exam. It is true that “practice makes perfect.” There are lots of Internet tools to help teachers give their students practice.

Review games are now easy to make on websites like Flippity.net. For example, I used a Flippity.net template to design my Quiz Show Review on Macroeconomics. We would play the game whole class or sometimes I’d have students review in partners, in what I dubbed a Jeopardy Duel. Web-based review games have one big advantage: you can share the link with students, so they can practice on their own time before the test.

In addition, if you have a room full of students with Smartphones you can provide lively test review competitions with websites like Kahoot.com. You design the questions on the Kahoot website and students to use their phones to answer review questions that are projected in front of the class. It keeps track of right and wrong answers. The kids like the competition. I liked that Kahoot gave me a quick sense of the what students knew and what I needed to review.

High quality assessments measure both content and skills. Use formative assessments for targeted instruction. And make use of a variety of Internet based review tools to help your students be successful test takers.