



Assessment Practices for Increasing Student Learning

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Think back to that question you missed on the world geography test but subsequently found the correct answer. We often learn from our mistakes; thus, you may remember the correct answer to that question today. This is not usually how we think about testing, as an opportunity not just for assessment but also for student learning. How can we make sure a test is not “one and done,” where the knowledge evaporates after it hits the keyboard?

Provide frequent, low-stakes tests rather than one high-stakes test

As part of the Harvard Institute for Learning and Teaching’s “Science of Learning” panel, Henry Roediger, renowned psychology researcher and professor at Washington University in St. Louis, presented his [findings on studying, testing frequency, and learning](#).

According to Roediger, testing offers ten benefits, three of which seem obvious to seasoned instructors:

1. Testing provides feedback to instructors,
2. Testing reveals knowledge gaps, and
3. Frequent testing encourages students to study.

The remaining seven benefits may be less readily apparent. Testing:

4. Causes students to learn more from the next lesson,
5. Produces better organization of knowledge,

6. Improves transfer of knowledge to new concepts,
7. Can facilitate retrieval of information that was not tested,
8. Improves metacognitive monitoring,
9. Prevents interference from prior material when learning new material, and
10. Increases retention through information retrieval.

Offering many low-stakes quizzes (versus solely high-stakes exams) provides both instructors and students a snapshot of learning at the present moment. At the same time, the practice activates what is known originally as the “testing effect” and now called “[retrieval practice](#)” – a phenomenon in which students’ long-term memory of content is increased more by frequent testing than by intense studying. In other words, when students retrieve information more often, the learning sticks.

What could this look like in a remote or hybrid learning environment?

Carnegie Mellon University’s Eberly Center for Teaching Excellence hosts a fairly comprehensive [website](#) dedicated to hybrid and remote teaching and learning. They advocate using [short multiple choice quizzes](#) that assess students’ learning in an abbreviated form. Here are some tools for making assessments quickly:

[Creating quizzes in Moodle Quiz](#)

[Creating Blackboard Tests and Surveys](#)

[Using Polls as Assessment Tools: *Poll Everywhere*](#)

[Using Quiz/Survey Assessment Tools: *Formative*](#)

(continued on p. 2)

Should I worry about cheating?

Doesn't offering more tests provide students with more opportunities to cheat? It might seem that way but actually cheating may be tied more to motivation and emotional state than to opportunity. In this [Teaching in Higher Ed Podcast](#), James Lang, the author of *Cheating Lessons: Learning from Academic Dishonesty*, explains why cheating is less tempting with low-stakes quizzes:

"If you look at examples of where cheating happens and cases in which researchers have looked at real classroom situations and measured rates of cheating in comparison to different types of classes, one of those results was that you know when students only have one or two opportunities to demonstrate their learning, on say like a midterm and a final exam, and that's it and that's how they earn their grades, you're intensifying the pressure on each of those two things. You're not really letting them know whether have learned the material and can do well on those exams so they're more likely to cheat in those cases."

Low-stakes assessments don't have to be limited to testing

In addition to short quizzes, the Colorado College Center for Academic Excellence offers a menu of [low-stakes assignments for online classes](#), annotated here with digital tools that can make those methods easier to implement:

- Exit tickets - [Socrative](#)
- Stop and summarize - [Zoom in-meeting chat](#)

- Graded discussion threads - [Blackboard](#)
- Fill-in-the-blanks prompts for students to summarize and synthesize - [Gap Fill Generator](#)
- Mini audio, video, or visual assignments that ask students to explain concepts, summarize readings, offer examples, apply their knowledge, or critique course material or discussion - [Flipgrid](#)
- Concept maps that demonstrate the relationships among ideas in a lesson – [Google docs](#)
- Annotations - [Hypothesis](#)

The science behind how people learn reframes tests and assignments as knowledge retrieval practice. While reading material intensely before a major exam works to a certain extent, current educational psychology research demonstrates that it doesn't promote long-term learning. Instead of putting information *into* students' heads, for a lasting effect instructors should focus on getting information *out* of students' heads.

To Learn More:

- Browse [Concrete Strategies for Frequent, Low-Stakes Assessments/Practice](#) from Carnegie Mellon University's Eberly Center for Teaching Excellence
- Watch the Summer Camp for Online Learning webinar: [The Academic Integrity Braintrust](#)
- Read "[Are Students Still Learning During COVID-19? Formative Assessments Can Provide the Answer](#)" from the World Bank Education for Global Development Blog