



Apply the Science of Learning to Online Classroom Assessment

Retrieval Practice

Quizzing and testing promote learning by pulling information from students rather than continuously giving information and expecting them to absorb it. Frequent, low-stakes quizzing supports retrieval practice. ‘Frequent’ and ‘low stakes’ can be anything from a 5-question quiz once a week to a 3-question quiz three times a week. Students are more likely to revisit content to study for a quiz worth points than revisit content just because it’s good practice.

Spacing

Spaced practice, studying material in shorter, more frequent periods of time, has proven to be a more effective learning strategy than studying or cramming for hours before a test – another reason for frequent, low-stakes quizzes in your online (or any) class.

Interleaving

Coming back to information that was learned previously stretches learning out over time and allows students to make connections among concepts and store information in long term memory. This can be accomplished in mini-lectures, readings, and quizzes, continually returning to (and linking to) previous content.

Background Knowledge Probes

Surveying students with low or no-stakes quizzes that assess background knowledge (in Canvas Quizzes, try the Practice Quiz or Survey option for non-graded options) gives both the student and instructor information about students’ readiness to learn. If students lack the background knowledge needed and they know they lack this knowledge, they can seek out extra support in the form of tutoring or self-directed learning. Instructors can provide links to quality tutorial videos and other resources for support. While it will take time to find and post these links, once instructors do this, they can be used in subsequent semesters.

Pre-post Quizzing and Testing

Administering a practice test/quiz (pre-test) that mirrors unit test/quiz (post-test) primes students’ thinking and gives them insight into the level of difficulty and thinking required on the unit test/quiz.

Elaboration

The online discussion tool can be used as a place for students to explain or elaborate on the “why” of a concept or organize content in a meaningful way. Write a statement as a discussion prompt and have students explain the “why” of the statement or how a process works. Based on an exemplar response (written by the instructor or an exemplary student), students can either self-assess or assess the explanation of a peer in the discussion thread. Self and peer assessments can be given points as a complete/incomplete assignment.

Metacognition

The online discussion tool in Canvas can also be used for students to monitor their own thinking and learning by periodically identifying what they know and what they don’t know throughout the course. Students can use quiz results to list what they know well and what they need to learn, setting a goal for future learning. Completion points can be given for this “discussion” assignment. Students can also be encouraged to respond to and support classmates in this thread.