EASY WAYS TO INCORPORATE THE RETRIEVAL PRACTICE EFFECT IN YOUR COURSE

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What is the retrieval practice effect?

The retrieval practice effect, also known as the testing effect, is a well-known cognitive psychological effect that can be used in classrooms across disciplines to help promote student learning. Research on the retrieval practice effect demonstrates that students' ability to remember and recall information effectively is enhanced when the information is retrieved regularly (Roediger & Karpicke, 2006; Roediger, Putnam, & Smith, 2011).

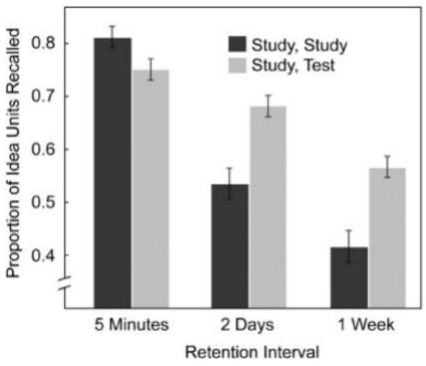
More testing does not necessarily mean more exams. By frequently testing your students, even through ungraded or low-stakes class activities, you are requiring your students to effortfully recall the recently learned material, which strengthens the memory for that material (Brame & Biel, 2015). Further, testing your students enables them to discover gaps in their knowledge, which is a feat that most other study techniques lack.

Why is this important?

This learning technique improves memory, retention, recall, and exam performance. When students are tested instead of simply repeatedly studying or re-reading the same material, long-term retention is enhanced (Roediger & Karpicke, 2006). The testing effect is a powerful way to strengthen memory traces and promote the skills needed on future tests (Roediger et al., 2011).

Is there evidence to support this?

Studies have shown the benefit of implementing the retrieval practice effect on student learning. In one prominent study on the testing effect, Roediger and Karpicke (2006) found that recall is significantly better when students were tested after studying instead of simply re-studying. This is true for testing after 2 days and after 1 week, demonstrating that the testing effect promotes long-term retention.



How can you implement it in your course?

Some common ways to implement the retrieval practice effect in your classroom include frequent low-stakes quizzes, guided free-writes, classroom games, and written reflection. Implementation may look different depending on the topic and size of your course.

Tips for smaller college classes:
With fewer students, you might implement frequent low-stakes quizzes that require students to recall as much information as possible. This can include short answer or essay questions that encourage students to make connections with the material.

Tips for larger college classes:
With more students, multiple choice questions may be more feasible. Utilize online tools such as student response systems ("clickers") to provide immediate feedback to all students.

Some considerations for effective implementation:

Most college students are not aware of effective study techniques, opting for popular study methods which do little to promote their learning. In fact, most college students are not formally taught how to study.

1. Inform your students that re-reading, highlighting, and/or underlining are not effective study practices. These study practices do not require recalling previously learned materials. Instead, these techniques enable students to feel a false sense of familiarity with the content.
2. Notecards can be an effective study tool if used correctly. Advise students to recall the information in mind or out loud *before* turning the card around.
3. Encourage your students to create their own quizzes or practice tests at home. Creating study materials promotes engagement with the material and can facilitate more frequent studying.

References

Brame, C. J. and Biel, R. (2015). Test-enhanced learning: The potential for testing to promote greater learning in undergraduate science courses. CBE—Life Sciences Education 14, 1-12

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