

Retrieval Practice

As E. M. Forster points out, “Unless we remember, we cannot understand.” Even as we try to develop our students’ power as critical thinkers, we must also keep in mind that memory is the foundation of learning. Recent research supports the idea that answering questions about new material—engaging in “retrieval practice” —does more to promote long-term retention than rereading. And because college students report highlighting and rereading as their principle study strategies, retrieval practice can become an important tool for student success.

The most obvious use of retrieval practice involves building frequent low-stakes quizzes into a course, especially where technology can help with the grading. However, today I’d like to describe three simple, ungraded activities that also provide retrieval practice.

- Begin class by asking students to recall, without checking their notes, what they learned in the previous session.
- Pause every fifteen minutes or so and ask students to share with a partner the important points made so far, a personal example of the principle under discussion, or their own definition of a key term.
- End class with a “one-minute paper,” a short and anonymous paragraph that explains the main point of the day’s class and mentions any lingering questions.

Retrieval practice is easy to implement, but a few simple techniques can help us make the most of it. First, as retrieval practice is most helpful if done regularly, it’s wise to select strategies that fit our personal teaching styles. Also, while answering any kind of question aids retention, open-ended questions are more powerful than multiple-choice items. Finally, to help students commit, instructors can explain how retrieval practice can enhance their learning.

Here are three good sources that discuss retrieval practice.

Brown, P. C., Roediger, H. L. & McDaniel, M. A. (2014). *Make it stick: The science of successful learning*. Cambridge, Mass: Belknap Press of Harvard UP.

This is a very readable and practical account of recent research into memory.

Lang, J. M. (2016). *Small teaching: Everyday lessons from the science of learning*. San Francisco: Jossey-Bass.

Lang emphasizes research-based teaching strategies that are easy to implement; two of the ideas mentioned above came from his chapter on retrieval practice.

Putnam, A. L., Sungkhasette, V. W. & Roediger, H. L. (2016). Optimizing learning in college: Tips from cognitive psychology. *Perspectives on Psychological Science* 11(5), 652-660. [DOI: 10.1177/1745691616645770](https://doi.org/10.1177/1745691616645770).

Written for students, this article explains why research-based study strategies like retrieval practice work, even though they may initially feel less effective than familiar approaches.

A teaching tip submitted by:

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