

## Helping Students Prepare for Final Exams

Research reveals a pretty dispiriting picture of how college students prepare for exams. About 80% of students depend almost entirely on rereading material—particularly previously highlighted textbook passages—and they do most of that work a day or two before the exam. In short, there is a stampede toward largely ineffective study practices. This common emphasis on rereading and cramming largely ignores psychologists' current understandings of how learning works. Here are three simple ways students can study more effectively.

- **Spread the studying out.** It's best to start studying 10 to 14 days before a final exam and to study each subject a moderate amount (45 to 60 minutes) each day. In between study sessions, a little bit of material will be forgotten, but the effort of recalling anchors it more firmly in memory. And with each pass over the material, less is forgotten.
- **Emphasize quizzing over rereading.** Excessive rereading is dangerous. The material starts to look familiar—and it's easy to mistake familiarity for knowing or understanding. Quizzing puts us in touch with what we really know or still need to learn. Flashcards are a good tool for quizzing; so is turning textbook headings into questions and answering them. Whatever the format, it's important to keep quizzing long enough. Answer a question correctly multiple times, in different orders, and on different days.
- **Go beyond rote learning.** Rewording definitions, writing sample essays, coming up with additional examples of a concept, or making connections between the text and personal experience—these are examples of what psychologists call “elaboration.” This richer approach to understanding can make it easier to retrieve material in stressful circumstances like an exam. Even if the goal is simple recall of key terms like “homeostasis” or “time value of money,” elaboration helps.

One more piece of advice is useful. Our brains consolidate memories during sleep, so it's wise to get a good night's sleep before an exam.

If you want to know more about what does and doesn't work during study, here are two good sources:

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

Putnam, A. L., Sungkhasettee, 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