**Study Strategies for Better Grades (and More Learning)**

How do you study for exams? Are you using evidence-based strategies? Did you know there are ways to study that improve exam scores? Educational psychologists and others have researched study strategies extensively, and their findings show that some approaches consistently produce higher test exam scores. Here’s a list of evidence-based study strategies and ways to maximize their effectiveness. Some you may be using already, but are you using them in the best possible ways? Others you may not know about. Will they work for you? There’s only one way to know. Try them out.

* **Spaced study.** It’s the opposite of cramming. What makes it an attractive approach are research findings that show if you study regularly, those study sessions can be short. Fifteen, 20, 30 minutes of focused study every two or three days results in a better understanding of the content and higher exam scores. Why? You’re reviewing the material more than once—it’s referred to as retrieval practice. You call up the information, remind yourself of what you’ve studied, and maybe learn a bit more about it. If you’re regularly working with the content, it will be easy to remember when it shows up on the exam.
* **Self-testing.** Do you ask yourself questions about the content and force yourself to come up an answer? A lot of students don’t. They “go over”—as in look at or reread—what’s in their notes and highlighted in the text. If you do that several times, the content starts to look familiar, but material can look familiar and still not be understood. It’s harder, but way more effective, if you see something you’re expecting will be on the test and then challenge yourself to define it, describe it, explain it, or solve it. If you can’t or you only get part of it, you’ve just discovered that you don’t yet fully understand it. Far better to find that out when you’re studying and can do something about it than on the exam, when what you do is lose points.

Flash cards and study questions are a great way to self-test, but not if you read the question or what’s on the card and promptly look at the answer. Remember: what works is self-testing, with *testing* the key word. Look at the card or question, and if you think you know the answer, say it or try to. If you don’t know it, put that card in a stack, place a check by the study question, and then review the cards and questions you couldn’t answer. After review and study, it’s time for another test.
* **Interleaving.** Loosely defined, that means mixed-up study. Typically, students study the material as the teacher presented it or it appears in the text. They go through their notes from the beginning to the end, but is that how teachers order the test questions? Not usually. Teachers mix up the content, so why not mix up your study of it? Yes, it harder to study content out of order, so maybe start by looking at it in order. But then change the order, mix up the problems, pick a day from the course, and review your notes for that day. This approach works because you end up knowing the material forward, backward, sideways, upside down, and inside out.
* **Study with others.** Some students prefer to study alone—and that’s fine to a point. Some time spent time working with others improves exam performance for a few reasons. If you understand something partly, incorrectly, or not at all, a fellow student might be able to explain it so that you do understand it, and classmates are lot easier to talk to than teachers. Explaining is valuable in both directions. If you’re doing the explaining, you’re getting practice putting an answer together.

One study buddy is fine; so is a study group provided the size stays small—not more than five or six people. If you and a study buddy use flash cards, exchange sets and see how you do. What goes on a flash card is something someone thinks will be on the exam. Cards in one stack but not the other are worth discussing. If the study group includes classmates you know and trust, you can divide up the content. Each person in the study group can prepare review materials on a different topic or set of problems.

* **Focused study.** Said bluntly, put your electronic devices away, out of sight. Students think they can multitask. Is that what you believe? The research consistently shows that it’s the device, not the text or your notes, that gets most of your attention. It’s fine to take breaks but not randomly, not while you’re in the middle of studying something. Finish the problem, the section, or the notes on a particular topic and then take a break, but not one longer than the time spent studying. Research also regularly documents that students underestimate how much of their study time they spend on their devices and how often they use those devices. Research results have repeatedly found that uninterrupted study time improves exam scores.
* **Interactive study.** Get engaged with the material. That doesn’t mean you have to love it. But to learn most things, you’ve got to stay focused on them. Recopying your notes doesn’t engage your brain; you can recopy and never move a mental muscle. It’s better to reorganize those notes, to combine them with material in the text, to add more details to the notes, or to use notes to prepare study questions or flash cards. Does memorizing a definition engage you with the material? Yes, if that means you can do something with the definition other than repeat it. Can you put it in your own words or say why it’s important? What’s an example of it? What can you apply it to?

Frequently, students make the big mistake of assuming that learning is easy. What you are trying to learn may be hard, sometimes less difficult, and occasionally easy. It depends on the course. It’s also true that some students learn some kinds of content quicker than other students. But most of the time, learning is hard, messy work. It takes time and effort and usually involves misunderstanding, not understanding, and making mistakes. But brains are big, efficient, and designed to learn. Like muscles, they often prefer to relax rather than work out, but also like the rest of our bodies, they can be trained. Once they’re in shape, watch out for awesome accomplishments.