



As another school year kicks into gear, you may have made a resolution that this will be the year you really buckle down and get those grades up. If so, you may need to consider mixing up the way you study, as your old routine does not seem to have achieved the desired results. But there's no time like the present to avail yourself of what scientists and researchers have discovered about the art of studying. Using these 17 scientifically proven methods, you'll be scoring higher as you crack the books smarter, not harder regardless of where you study – [Utah](#), [Rhode Island](#), [Kansas](#), [South Carolina](#), [South Dakota](#), etc.

1. **Thwart the “curve of forgetting”:**

Scientists have known about this brain event since 1885, yet somehow students never seem to pay it any mind. The first time you hear a lecture or study something new, if you review the material that same day within 24 hours, you prevent yourself from forgetting up to 80% of what you learned. After a week it takes only 5 minutes to retain 100% of the info.

2. **Ditch cramming:**

So now you know interval studying is best, but what if you don't have time to study every day? UCâ€“San Diego psychologists found that it's still better to study closer to the day you learned the material than to the day of the test. They put the optimal time at 10% of the time between learning and testing. So if you learn something on Monday and the quiz is the following Monday, study no later than Wednesday.

3. **Use active recall:**

In 2009, a professor of psychology at Washington University in St. Louis published an article in *Psychological Science* advising students against studying by reading and rereading textbooks, which leads people to think they know material better than they do because everything is right in front of them. He advised instead that students use active recall: closing the book and reciting everything they can remember to cement long-term memorization.

#### 4. [Stick to print:](#)

Tablets and other mediums of e-learning are great, but the current research findings still give the upper hand to traditional print materials when it comes to studying. The iPad causes 6.2% slower reading times than a printed book, while the Kindle is 10.7% slower. Furthermore, a psychology lecturer at the University of Leicester in England found [students required more repetition](#) to learn new material reading on a computer screen than a print book.

#### 5. [Use the Leitner System:](#)

Flashcards are an example of active recall, and the Leitner System is the best way to use flashcards. Named for its originator, German scientist Sebastian Leitner, the system involves moving the cards with correctly answered questions further down a line of boxes and moving incorrectly answered cards back to the first box. The cards in the first box are studied most frequently and the interval becomes greater as you proceed down the line, forcing you to review the material you know least well over and over until you learn it.

#### 6. [Don't overlearn:](#)

Once you've been able to cycle through all your flashcards without making a single mistake, continuing to study is known as "overlearning." Traditional thinking held that if a little studying is good, a lot of studying must be even better. But researchers from the [University of South Florida](#) and UC San Diego found that there is a sharp onset of diminishing returns that quickly sets in during overlearning. Since you have a limited amount of time to study for each class, take their word for it that you're better served moving on to something else.

#### 7. [Listen to music:](#)

No, we don't mean Kanye. According to researchers at [Stanford's](#) School of Medicine, if you will set Pandora to play "obscure 18th century composers," you'll engage the parts of your brain that help you pay attention and make predictions. Listening to music can also put you in a better mood about studying and could even [change your perception](#) of studying (and the world in general).

#### 8. [Stop multitasking:](#)

You may think you're killing two birds with one stone by texting or instant messaging while studying, but really you're just killing your studying efficiency. An Indiana University study recently showed multitasking inhibits studying by interrupting the absorption and processing of information. Similar studies by [Ohio State University](#), research firm [Kaiser Family Foundation](#), and others confirm that multitasking is a studying no-no.

#### 9. [Relax:](#)

Here is another reason not to wait until the last minute to study: stress hinders learning. UC Irvine researchers found that even stress that lasts as briefly as a couple hours can engage corticotropin-releasing hormones that disrupt the process of creating and storing memories. So taking study breaks to exercise or draw a few deep breaths will help your studying if they lower your stress level.

#### 10. [Get some rest:](#)

All-nighters have long ago been [debunked](#) as effective study techniques. Now research out of the [University of Notre Dame](#) has shown the best way to recall information is to sleep after learning it. Students were split into two groups: those who studied at 9 a.m. and then went about their day, and those who studied at 9 p.m. then went to sleep. Both at 12 hours and 24 hours later, when both groups had had a full night's sleep, the ones who slept shortly after studying scored higher.

#### 11. [Take the practice tests:](#)

Many college professors and some high school teachers make old exams available as practice tests for students. While the benefit of a preview of your instructor's testing style is obvious, a recent [study](#) that appeared in *Science* magazine showed students who tested themselves after learning something retained an amazing 50% more of the material a week later than their peers who did not take a test. So don't pass up the opportunity to mix practice tests into your study routine.

#### 12. [Make connections:](#)

According to [one A+ college grad](#) who barely studied in college, the difference between slow learners and quick studies are the way they study: instead of memorizing, quick learners make connections between ideas. Known as contextual learning, the process entails an individual student putting information into a form that makes sense to him or her. The A+ student recommends cramming all the info into one place (a sheet of paper or chalkboard) to get a full picture and aid the making of connections.

#### 13. [Think about your thinking:](#)

An important way to improve your learning is to employ metacognition, or thinking about thinking. It may sound silly, but numerous studies (Halpern, 1996; Borkowski, Carr, & Pressley, 1987; Garner, 1990) have shown its effectiveness. Students need to be able to assess their level of learning and skills in order to determine whether they need to continue studying and to gauge their emotions about their ability to learn a subject and prevent negative thoughts from creeping in.

#### 14. [Change your scenery:](#)

As UCLA psychologist Robert Bjork says, there are a number of scientifically proven study techniques we've known for a while that are often simply ignored. One of these is that moving to a different room to study improves retention, a big supporting factor for [outdoor education](#).

#### 15. [Forget about "learning styles":](#)

A recent work by researchers from UC San Diego published in the *Journal of Advanced Academics* shot holes in the longstanding belief in "learning styles" of visual, auditory, and kinesthetic. Despite the "enormous" amount of work on the subject, the scientists found "virtually no evidence" to support the learning styles idea, although they left the possibility open to further investigation. For now, don't go out of your way to try to make your material fit a specific style; it's not worth your time.

#### 16. [Exercise first:](#)

The [benefits of exercise on the brain](#) are many and well-documented. You can also give your studying a boost by breaking a sweat shortly before you study. According to [Dr. Douglas B. McKeag](#) of the Indiana University Medical Center, exercise gets blood flowing to your brain more evenly and make you more alert and more able to learn.

#### 17. [Vary the material:](#)

Just like changing the scenery, scientists also have proven it's better to focus on several distinct but related topics rather than zeroing in on just one area. For example, instead of just memorizing vocabulary, mix in reading as well. If doing math, tackle several concepts instead of just one.