5 Study Skills to Accelerate Your Learning

by Winston Sieck - September 01, 2015

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So much to learn.

Will it ever end?

Nope. You will be learning for the rest of your life. School is simply a kick starter. No matter what path you take in life after school, learning will be part of it.

Yet, the forever journey to develop your talents doesn't have to be nerve-racking or unpleasant. Comfort comes from knowing that you have the competence to quickly ramp up on new topics and grasp them deeply.

How?

Whatever else you are learning in school, you also need to practice study skills that will make you a competent learner.

Don't think that study skills are just about how to do well in school. A solid base of study skills and learning strategies is even more useful after you leave school, when you continue learning on your own.

Fortunately, cognitive and educational psychologists have been conducting painstaking scientific research on study skills and strategies for ages. There is currently a wealth of good science about what study skills work and what methods don't.

John Dunlosky of Kent State University and his collaborators reviewed a large collection of research related to ten different study skills. Their paper on improving students' learning was published in *Psychological Science in the Public Interest*. Dunlosky found that about half of the study skills did not work very well. Current research suggests that the other half are effective.

Here are the 5 study skills that Dunlosky and team found to be the most effective:

- **Elaborative interrogation:** Answering why a fact is true
- **Self-explanation:** Explaining what a section of text or an example problem means to you
- **Practice testing:** Testing yourself on the material you are trying to learn
- **Distributed practice**: Spreading your studying out over several sessions
- **Interleaved practice**: Mixing different kinds of problems together when studying

Best Study Skills #1: Elaborative interrogation (Asking "Why")

A great way to learn is to ask yourself questions. Little kids know this intuitively, as they run around asking “Why, why, why?” A great deal of research has proven that the kids are on to something. Getting students to answer questions, such as “Why is this fact true?” aids learning.

The main reason asking “why” questions seems to work is that it encourages you to integrate the new fact with things you already know. Doing so improves your memory for the new fact by giving you more “hooks” to find it. Research also suggests that some ways of questioning yourself work better than others.

Best Study Skills #2: Self-Explanation

The idea behind self-explanation as a reading strategy is to pause from reading your textbook periodically and explain to yourself what it means to you. You can do this after a section of text, or when studying an example problem. When trying to self-explain, you may find that you need to look back over parts of the text to fully understand what’s being said.

Professor Micki Chi offers a nice account of why self-explanation works. Her ideas were published as a chapter in the book, *Advances in Instructional Psychology*. The idea is that self-explaining encourages you to make inferences based on what you are reading. You don’t just summarize the text, but say a little more than what was in it. As you try to explain, you also identify problems and so revise your explanation. These serve to enrich and repair your understanding.

Best Study Skills #3: Practice testing

The main idea behind practice testing is that actively testing your memory improves learning far more than passively reviewing material. Tests are not just for evaluation anymore.

Testing improves learning by exercising memory retrieval. When you answer a test question, you have to actively search your long-term memory. Doing so creates more and better pathways to the answer. This makes the answer easier to find the next time around. Scientists sometimes call it, “retrieval practice.”

Practice testing is easy to do. You can make flash cards or answer questions from your textbook. You can often find free practice tests online. Make sure you can get the correct answers. Practice testing works best when you can find out whether got the answers right or wrong.

Best Study Skills #4: Distributed Practice

You have a test coming up, oh say, tomorrow. You haven’t studied at all. Should you cram for it? Sure. And, good luck.

For the next time, you’d really do better to space your studying out over the time you have. Do a little at a time over several study sessions. That’s the idea behind distributed practice.

One reason distributed practice aids learning is that you have to re-start your memory for the topic during each study session. Once your memory for the topic is warmed up and moving, doing more is fairly easy. Like a car coasting downhill, it’s too easy. Stopping and starting is harder on your memory. That’s good

(unlike the car), because it strengthens your memory.

Distributed practice seems to work regardless of how you go about studying. Yet, you can do best by combining it with practice testing. Don't be mad at your instructor for giving you lots of quizzes. They give you a double dose of good learning. Try (and try again) to get in the habit of doing it yourself!

Best Study Skills #5: Interleaved Practice

When studying math, you need to learn a few different kinds of formulas. For example, you learn one equation to compute the area of a circle. You learn another to figure out the perimeter. The idea behind interleaved practice is that you are better off mixing some area problems with some perimeter problems when you study.

The reason this works is that you need to learn a bit more than how to apply each formula. You also need to learn when to use one formula and when to use another. When you see a new problem, you first have to figure out what kind of problem it is. By interleaving the problems during your study sessions, you give yourself practice at telling the problems apart.

Conclusion

Based on the research to date, these five study skills all work quite well. The team who reviewed the research recommended a couple of these 5 study skills more strongly than the others. The main reason is that the team would like to see even more research to answer a few additional questions. It's not that the researchers know for sure that some of these study skills work X% better than others. I mention this because some summaries of the paper may give that wrong impression.

Each of these study skills is also fairly easy to use. Training and practice can make some of them more effective, but there is no need to wait.

The best way to begin is to start trying them out. Pick one and experiment with it. Get it down. Then, revisit the list and pick another.

Master these 5 study skills. Each will lighten your learning load.

And put a spring in your step, on the long learning road ahead of you.

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