How to improve your memory

By Drake Baer
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Cognitive science has come to a few conclusions about the mechanics of learning.

For example, if you're trying to remember what you read, highlighting doesn't help.

On the other hand, flash cards do.

The difference lies in what psychologists call desirable difficulty.

Essentially, when learning feels difficult, learning is actually happening.

It's like when you lift a weight that's at the limit of your capacity — you get stronger, faster.

"With desirable difficulty, you're training your brain to think that something is important to your survival," Benedict Carey, author of "How We Learn," tells Business Insider. "You're showing the brain that something is important by devoting mental energy."

The most effective learning strategies take advantage of this.

Such as:

**Retrieval**: Where you force your brain to recall a fact, like with flash cards or the Cornell Notetaking System.
Spacing: Instead of trying to “cram” knowledge into your brain all at once, you return to a subject over a number of days. “It’s a richer mental act than when you’re just reading over,” Carey says.

Self-testing: Taking a practice test before the real test comes up. It doesn’t just give you a measure of how much you understand; it helps cement what you already know in your memory.

Interleaving: If a topic or skill has component parts, alternate between them. If you want to get better at basketball, switch between passing, shooting, and rebounding instead of devoting yourself to one. “If information is studied so that it can be interpreted in relation to other things in memory, learning is much more powerful,” UCLA psychology professor Robert Bjork tells Psychology Today.

In short, the more mental muscle you use, the stronger the memory.

It’s powerful knowledge for learners — and educators.

“That’s why the teachers who are up to speed on this will encourage students to make their own outlines of material” instead of just handing them out, Carey says. “One’s a passive thing where you’re just getting it from the professor, but with the other you’re actually digging into the material.”

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