

Study Habits: Rethinking How We Learn Best

A recent headline caught my eye: “Psychologists have discovered that some of the most hallowed advice on **study habits** is flat wrong.” It’s always good to be shaken up, so here’s the news: Empirical studies in neuroscience dispel some old myths. It’s the quality of study time that matters. Findings from cognitive research on study techniques can help students focus effectively and make the most of their study hours. Some research encourages variety to spice up study life while one study validates an old tried-and-true approach.

* Varying the material that you study at a single sitting can increase retention. Instead of bracing for one long, continuous slog through a subject, turn to different but related aspects of the topic. Just as athletes train different muscle groups with a variety of drills for strength, speed, and overall conditioning, when studying, you can apply the same principle for mental muscles. For example, when studying a foreign language, alternate reading with writing, vocabulary drills, and listening. Mixing different types of material in a single session should help learning and retention. Prof. Nate Kornell, of art history at Williams College, researched adults studying the styles of different painters in a mix of examples. He found that “the brain is picking up deeper patterns when seeing assortments” of material. The technique of mixing materials helps “keep it fresh” for the brain.

* Varying the setting or room in which you study is a simple technique to improve retention. In a famous 1978 experiment, psychologists compared a group of college students who studied a list of 40 vocabulary words in two different rooms—one cluttered and windowless and the other tidy with a view—to a second group who studied the same list in the same room twice. When tested, those who studied in two different locations outperformed the group who used a single room. More recent experiments with other types of study material have confirmed this finding. Why does varying the location enhance absorption and retention? Psychologists surmise that shifting the setting creates multiple associations at the subliminal level to help fix ideas in the mind.

* Studying in phases also increases learning. Students know this from experience. Cramming one type of material in a long session is not as effective as dividing study times over a longer haul. In a New York Times article “Forget What You Know About Good Study Habits” (Sept. 6, 2010), Benedict Carey compares cramming to “speed-packing a cheap suitcase” which “holds its new load for a while, then most everything falls out.” To study for maximum benefit, he recommends careful packing to store mental material for future use. Students can do this by simply looking at the material during several shorter sessions spaced over several days—without adding extra minutes to the total study time devoted to the task. There’s a certain justice in the finding that

those who wrestle with material repeatedly retain it longer than those who cram for an exam in one long session and then promptly forget what they learned. Psychologists hypothesize that some forgetting, some relearning through repeated sessions reinforces memory.

* Finally, the age-old technique of testing is effective not just for assessing learning but also for studying. Self-questioning, quizzing, practice drills all boost mastery of material. Psychologists call this “desirable difficulty, ” a term that suggests the old adage “no pain, no gain.” Self-inflicted tests can increase familiarity with material and build confidence. According to neuroscience, each time we withdraw an idea from our memory bank, we revise and strengthen it before filing it away again. Good students learn to make a game of testing to sharpen their skills. Some love speed math contests. Some design flashcards. My favorite is word games. At a conference a friend showed me the “Freerice.com “ website for vocabulary testing with increasing levels of difficulty-- and a payoff to fight world hunger. It can be addictive.