

Revision techniques - the good, the OK and the useless

It's the time of year where students are poring over their books, trying to ensure they are prepared for their exams. Revision charts, highlighter pens and sticky notes around the room are some of the methods people use to ensure information stays in their mind. But now psychologists warn many favourite revision techniques will not lead to exam success.

Universities, schools and colleges offer students a variety of ways to help them remember the content of their courses and get good grades. These include re-reading notes, summarising them and highlighting the important points. Others involve testing knowledge and using mnemonics - ways of helping recall facts and lists, or creating visual representations of the knowledge.

But teachers do not know enough about how memory works and therefore which techniques are most effective, according to Prof John Dunlosky, of Kent State University.

Help - or hindrance?

He and his colleagues reviewed 1,000 scientific studies looking at 10 of the most popular revision strategies. They found that eight out of 10 did not work, or even hindered learning. According to the research, the two techniques that are the most effective are Practice Testing and Distributed Practice. Practice Testing involves self-testing or taking practice tests on material that you are trying to learn whereas Distributed Practice is when you implement a schedule of practice that spreads out study activities over a longer period of time, and involves repeating the same revision several times.

Practice Testing can involve testing yourself on notes taken or flash cards that have been created. When taking notes, a good habit is to leave room on the page for practice tests. When revisiting the notes, students should hide the key notes or concepts with their hand or a piece of paper and then attempt to write them out in the remaining space that they left on the page. Ideally, students should persist with their revision until they can recall all of the information. A good technique is to try and recall all of the important information from memory, and then go back through the notes again and attempt to correctly recall anything that wasn't right on the first pass.

The other recommended technique is **Distributed Practice**. An example would be to revise something a month before an exam, then re-visit a week before and again the day before the exam. The alternative to Distributed Practice is Mass Practice – also known as cramming, which is much less effective. This involves spending a long period of time trying to fit in a lot of revision in one go, typically the night before. Students will retain knowledge and skills for a longer period of time when they distribute their practice than when they mass it, even if they use the same amount of time massing and distributing their practice.

How the Techniques Fared

High impact	Practice testing - Self-testing to check knowledge - especially using flash cards
	Distributed practice - spreading out study over time
Moderate impact	Interleaved practice - switching between different kinds of problems
	Self-explanation - how a problem was solved
Low impact	Summarising - writing summaries of texts
	Highlighting/underlining
	Imagery - forming mental pictures while reading or listening
	Re-reading