



USING EFFECTIVE STRATEGIES FOR LEARNING

Massed practice or 'cramming', a strategy many students use when preparing for exams and assessments, had been demonstrated to be largely ineffective for deep learning and long-term retention. Cognitive science research has identified five strategies that students can use in order to study and learn more effectively.

1. SPACED PRACTICE

It is more effective to spread out study over time rather than doing it all at once. For example, it is better to spend an hour a day studying maths from Monday to Friday than to spend five hours on one day. [Link to ideas](#)

2. RETRIEVAL PRACTICE

Retrieval practice involves remembering something you have learnt in the past and bringing it back to mind. This helps to consolidate the memory and makes it easier to remember next time it is needed. [Link to ideas](#)

3. ELABORATION

Elaboration refers to describing and explaining something you have learnt. It is effective because you need to understand something deeply in order to be able to explain it. Students can use elaboration by trying to create the explanation themselves before checking their notes to see if it is correct. It is also helpful for students to make links between the ideas they are currently learning and their existing knowledge. [Link to ideas](#)

4. INTERLEAVING

Rather than focusing on learning one idea for a long time, it is better to switch between them. For example, rather than working on one type of maths problem for half an hour, students should do five problems of one type and then five of another. Interleaving is effective because noticing connections and differences between different ideas helps to strengthen students' understanding of them. [Link to ideas](#)

5. DUAL CODING

Dual Coding refers to combining words with pictures or diagrams. Presenting information in this way can make it easier to understand and give students more ways of remembering it. It could be as simple as drawing a chart or a doodle in their notes. For example, if they are trying to learn some key dates for a history exam, it might help to put the events on a timeline. There is also evidence that writing out notes by hand might help students to understand and remember the content better, particularly if they try to put things into their own words and use drawings or diagrams alongside the written text. [Link to ideas](#)

Using these evidence-based strategies and techniques for studying will lead to deeper learning and long-term retention, rather than the superficial understanding and short-term retention that re-reading and highlighting notes promotes. However, many of these approaches require students to work consistently and regularly, rather than doing all their work in one go, so it is important that they know how to keep themselves motivated to work in this consistent, ongoing way.