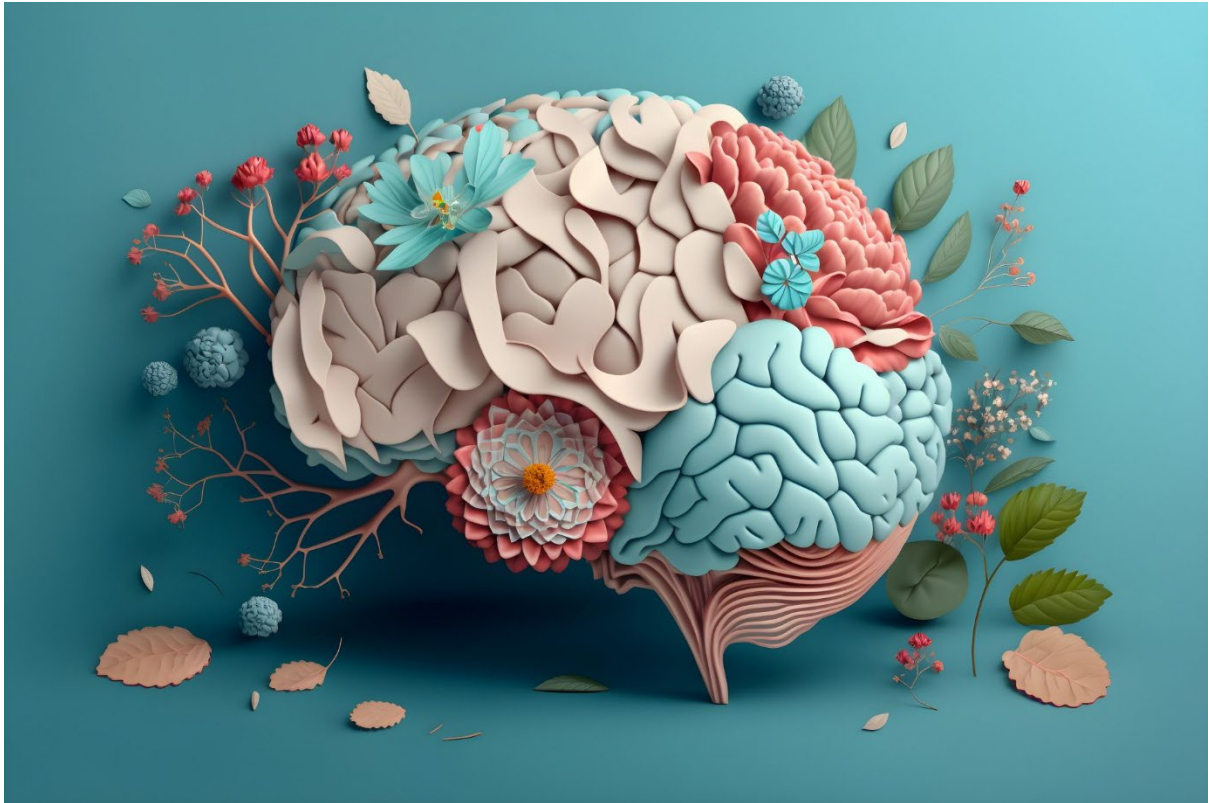




Spaced repetition

When it comes to scheduling your study, you have a choice between multiple short study sessions over the semester, something we call spaced repetition, or long blocks of study very close to the test or exam, what we think of as cramming.

Studying using spaced repetition is a much more efficient and effective way of learning.

When learning skills in certain domains, we often intuitively understand that spaced repetition works. For example, if you were learning a piece of music on the piano for an upcoming performance, you'd likely space out your practice – doing a little each day over many weeks or even months – rather than cramming in the few days before the recital. The same principle applies to studying: starting early is both more efficient and more effective.

The forgetting curve

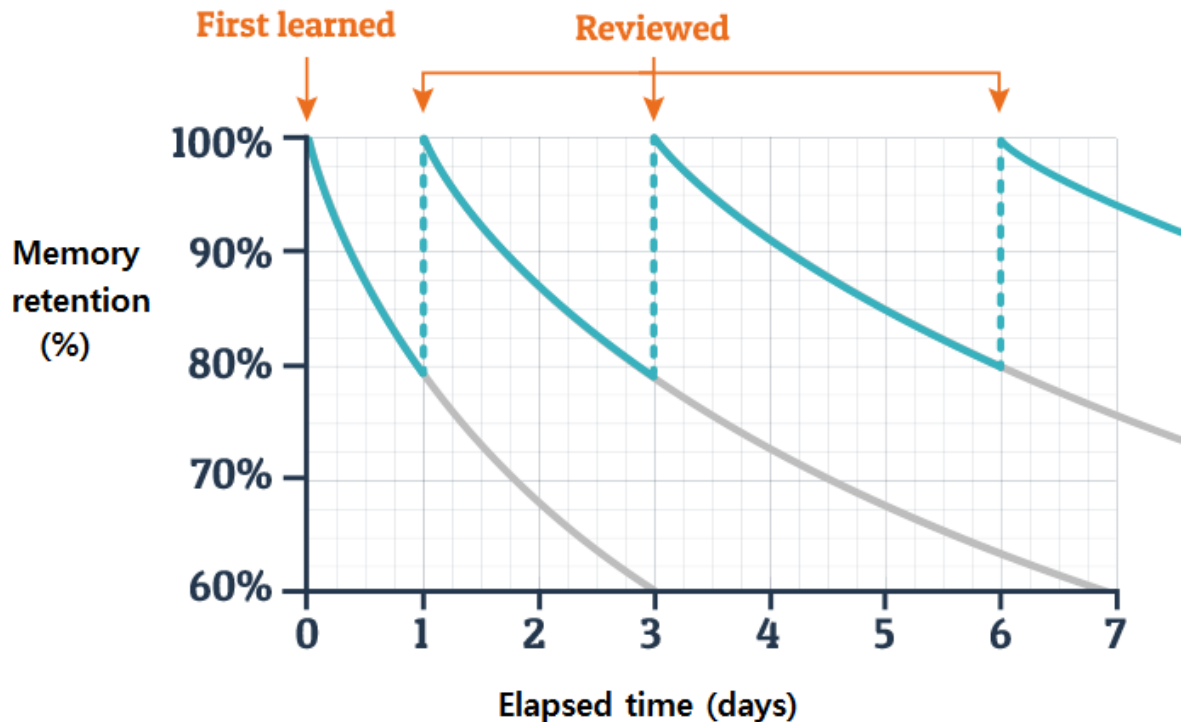


Figure 1: The forgetting curve

Image long description: A graph with a vertical axis representing memory retention (%) from 60% to 100%, and a horizontal axis representing elapsed time (days) from 0 to 7. After material is first learned at day 0, retention drops from 100% to about 80% by day 1. Reviews at days 1, 3, and 6 are marked by dashed teal lines that restore retention to 100%. After each review, the forgetting curve becomes less steep, showing slower memory decline.

This study strategy is based on a well-established scientific finding known as the forgetting curve. When we first learn something, we tend to forget it quickly. However, with each subsequent review of the same information, the rate of forgetting slows down. This means that by revisiting what you're learning at spaced intervals, you can maximise your long-term retention and reduce your overall study time.

Although it can feel like cramming works, spacing your study out means you will create longer-lasting memories using the equivalent amount of time.

We all know cramming is stressful, yet many students find they get some success from it. Unfortunately, anything you learn by cramming is likely to be forgotten after a few days or weeks.

Spaced repetition does take some forward planning, but will actually save you time in the long run because you learn in a way that's more likely to stick. Most courses build on content from the previous semesters, so it means you don't need to spend as much time relearning content from past semesters.

How to space your study

- Avoid cramming all your study into the week or two before exams. The sooner you get started, the better.
- Plan short and frequent review sessions: set aside small blocks of time every day, or every few days, to review new and old concepts.
- Get into the habit of turning your lecture notes into materials you can easily study using spaced repetition such as practice questions, flashcards and mind-maps.

Make sure you:

- revisit the same material multiple times
- spend time on retrieval practice (testing your knowledge) rather than just rereading your notes.

What if it's already exam time?

Even if it's close to exams, you can organise your time using spaced repetition. Rather than dedicating one long block for each topic, organise your time so that you switch up topics. The most important thing is that you keep returning to the same information multiple times over a period of days, weeks or months.

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