

How to study effectively

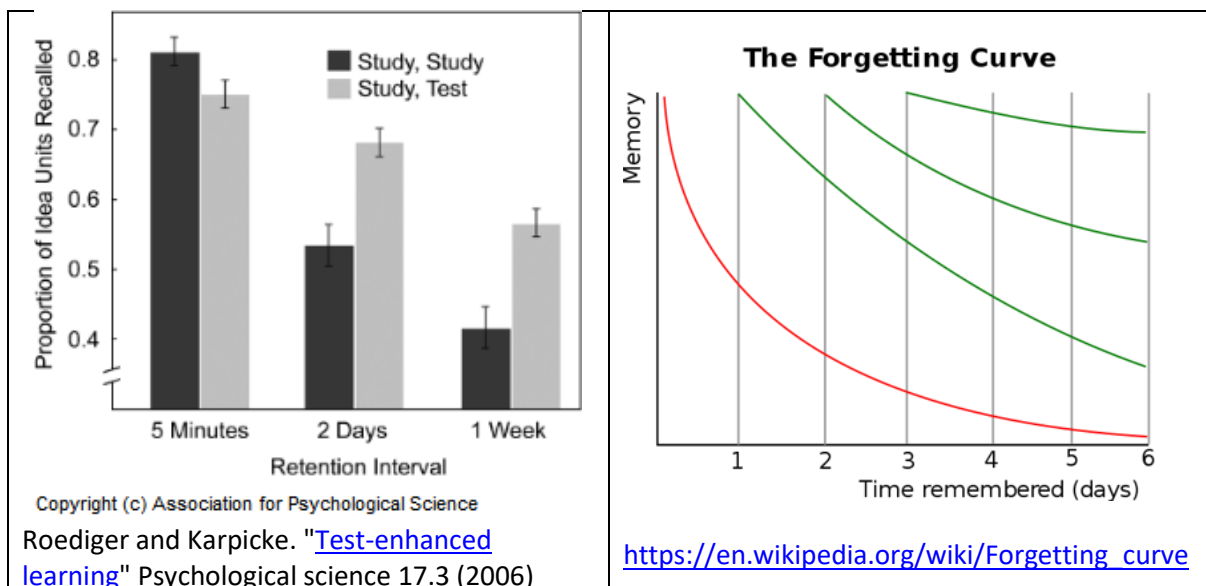
Link to the "slides" I used: <https://workflow.com/s/how-to-study-effecti/9nnB0oM9BKK5EK6j>

General points

1. Some people can get through school without much study or with ineffective study and still get top grades. At university the percentage of students who can study ineffectively and/or not work hard and still get top grades drops dramatically.
2. Try the techniques properly for 3 weeks then go back to whatever system you prefer.
3. If you don't try the techniques in your first week you probably never will.

To remember something practice recall.

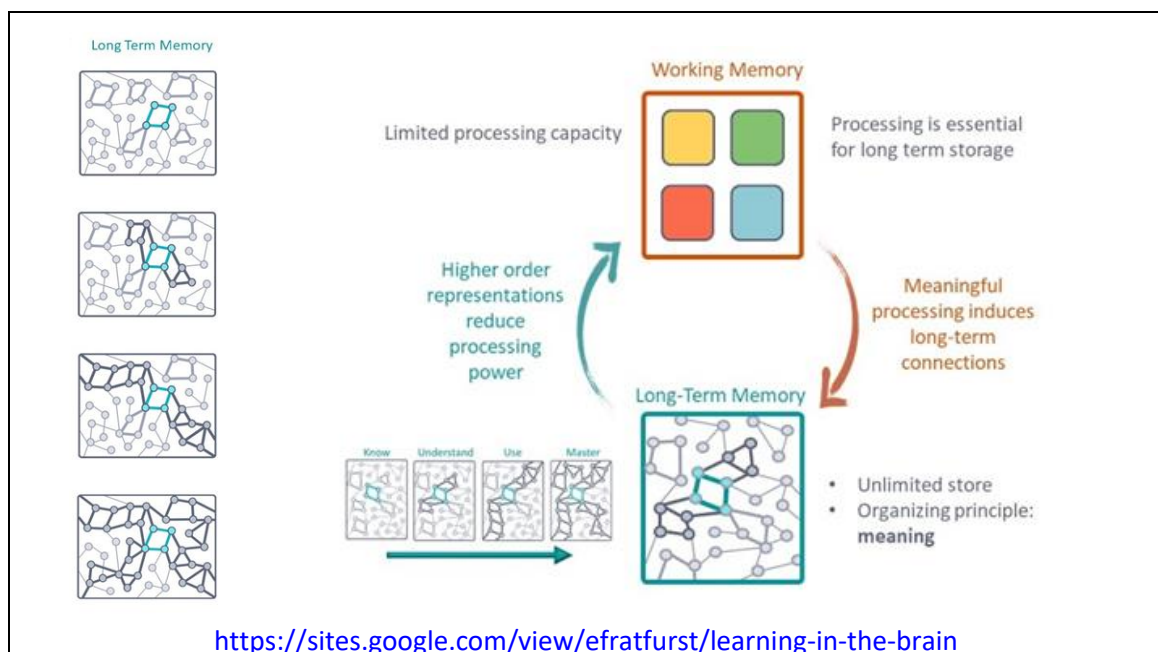
- Re-reading or highlighting is not an efficient use of time. You can trick yourself into thinking you are learning without actually doing anything useful.
- If you want to remember something, then you need to repeatedly practice recalling it.
- To practice recalling something try one or two of the following suggestions:
 - Cover up a page of the textbook / your notes / a solution to a question and summarise (in writing or verbally or in your head)
 - Explain the main points from a video you just watched to a friend/pet/houseplant
 - Try recalling main ideas when you are walking to class, or in the shower.
 - Solve questions *without* your notes.
 - A week after working through a question sheet pick the harder questions and 'verbally sketch' the solution (list out the main points or main steps you need to remember when solving it, but without writing anything down or actually solving it)
 - Go back over last week's notes before your new study session and recall the details.
 - Make flashcards (small cards with a question on one side and an answer on the other). Remember that studying the card is more important than making them.
 - Use a flashcard/spaced-repetition programme such as <https://apps.ankiweb.net/> or <https://super-memo.com/supermemo18.html>
 - Create a [mind map](#) or [concept map](#) from memory.



To understand something think deeply and form connections.

At university you will have to answer questions that you haven't seen before. You can't just rely on past exam papers if you want to get a good grade. Memorising is not enough for these questions; it requires a deeper understanding. Understanding is all about building connections. To do that you need to think deeply about the material.

- The best way to do this is to pretend you are about to teach a revision class on this topic before the test. How would you prepare for it?
- To build connections try one or two of the following suggestions:
 - Explain the topic to someone, anyone – someone on your course, your housemate, your pet.
 - Go for a walk and think through the things you have just learnt; pretend you are about to teach it to a friend who missed the lecture (or hasn't yet worked through the question sheet/case studies/etc). It's even better for you if you can find that person and really teach them!
 - After reading a chapter / watching a video ask yourself the reflective questions:
 - "What does this remind you of?"
 - "Why is this true?"
 - "When/how can I use this knowledge?" <https://xkcd.com/208/>
 - After every assignment and test, go over your errors, make sure you understand why you made them, and then rework your solutions
 - When you finish an entire topic/section try to remember the most important 3 concepts/facts from the entire thing, repeat for the top 10, then the top 20.
- Remember that it is common to be unable to solve problems or figure out concepts the first time you encounter them. This is why a little study every day is much better than a lot of studying all at once. When you get frustrated, take a break so that another part of your mind can take over and work in the background.



To reduce procrastination, plan your week & use mental contrasting.

- **Remove distractions.** Every tiny pull toward an instant message or conversation means you have less brain power to devote to learning and makes it harder to keep studying. Try:
 - Turning off all interrupting beeps, notifications and alarms on your phone and computer.
 - Pre-empt any other distractions by using mental contrasting or as part of a weekly review
- **Make a clear study plan for each week.** By having a clear plan for what you will study (and where and when you will do it) it becomes a lot easier to get started. Try doing a weekly review first thing on a Monday morning.
- **Try mental contrasting to increase motivation.** If you are still finding it hard to motivate yourself, use mental contrasting (see the description on the next page).
- **Motivating yourself to study is often easier when you are in a group.** Working together is often a lot more efficient and more fun! You are also a lot less likely to get stuck if you study together. Try finding a couple of other people on your course and agree a couple of hours a week when you will study together.
- **If you get stuck, ask for help!** Formulating questions about the material is a good way of actively engaging with it. There are lots of reasons to ask questions: making sure you have understood something correctly, clarifying potential points of confusion, understanding why things are done in a particular way, and learning to critically engage.
- **If you keep getting distracted by apps / websites** on your phone or computer, you can download software to temporarily block them. I use <https://getcoldturkey.com/> for my computer and <https://www.appblock.app/> for my phone (you can set AppBlock up to automatically block certain apps when you are near the library, block things during 'work' hours, or block things after midnight if you want to improve your sleep)

Weekly Review (20mins)

1. Block off any commitments/events and highlight deadlines in your diary for this week.
2. Decide what you want to complete this week and add it into your diary (where & when).
3. Write down the main distractions & obstacles you faced / expect to face?
4. Write down simple plans for how you will overcome these obstacles. Make sure you plan has a 'situation' and a clear 'action' e.g., "when <situation>, I will <action>".

Mental Contrasting and Implementation Intentions

You have a much better chance of succeeding with a goal or habit you if you use this technique (it could be for studying, exercising, healthy eating, getting rid of bad habits, etc.). It should take you less than 10 mins to complete.

Step	Description	Example
Goal	What do you want to do?	Mastering the material from the advanced statistics course
Outcome	Set a 3-minute timer. Imagine all the good things this will lead to. Get motivated/excited	Lower stress, higher mark, better job, future courses are easier, more time with friends
Obstacles	Set a 3-minute timer. Think of the inner obstacles, the things that will distract or frustrate you in trying to complete your goal and think of the things you must do (the tasks).	I will get distracted by Instagram. I will get stuck trying to understand the material. ...
Contrast	Think back through the outcome and obstacles and contrast them against each other. Do you want to commit to the goal?	
Action plan 1 (where/when)	Decide exactly <i>where</i> and <i>when</i> you will do the tasks.	I will study each week at 2pm on Monday with Jane in the library.
Action plan 2 (if ... then ...)	Create simple plans for how you will overcome your main obstacles. Make sure you plan has a 'situation' and a clear 'action': <ul style="list-style-type: none">• "when <situation>, I will <action>"• "if <situation> then <action>"	1) When I sit down to study, I will turn my phone off. 2) If I'm stuck, then I will message my study group and ask if anyone can explain it to me.