

## exam / study tip # 6

### The Most Effective Learning Technique Known to Man

*Do you spend too much time studying for what you are learning?*

*Do you forget a lot of what you've learned in a few days?*

*Do you obtain test/exam marks that do not reflect your effort or potential?*

*Do you develop mind blanks in tests and examinations?*

*Would you like to find a way of learning that enables you to commit more knowledge to memory in a shorter amount of time?*

If you answered **YES** to one or more of the above questions, then chances are that you have been engaging in ineffective and time consuming learning techniques!

#### **So how do you commit knowledge to memory?**

*Do you quietly read your notes and/or textbooks underlining or highlighting key points as you come across them?*

*Do you re-write materials until you know them "off by heart"?*

If you are using either of the above techniques when preparing for tests and exams, you are engaging in the most **ineffective and time-consuming** learning techniques known to man! And these are the most common strategies used by students to prepare for the exams!

Re-writing and/or reading silently are relatively simple tasks that do not engage many zones in your brain. It is therefore easy to stray or think about unrelated matters – impairing the amount of information that can be input to memory. As an example, whilst reading a book, have you ever reached the bottom of a page and asked yourself:

***"What did I just read?"***

Writing, re-writing and silent reading are only effective (and then only moderately so) when the materials being attended to are of great interest, which is usually not the case when preparing for tests and examinations!

#### **So what method should students be using to effectively commit knowledge to memory?**

**PTO**

*"By three methods we may learn wisdom: first, by reflection, which is noblest; second, by imitation, which is the easiest; and third, by experience, which is the bitterest." Confucius (551-479 BC)*

Research shows that we remember more of what we learn when we involve more parts of the brain. And there is no technique that uses more of the brain than **DOING**, which includes:

- (a) Working through examination style questions (80-85% retention rate)
- (b) **TEACHING** (95% retention rate).

When teaching or vocalising what you are learning in your own words, we are engaging in a technique known as **elaborative rehearsal**. This technique has been shown to be instrumental in transferring information from short term memory to the higher levels of long-term memory, as it enables the brain to draw strong connections between what you are trying to remember and what you already know.

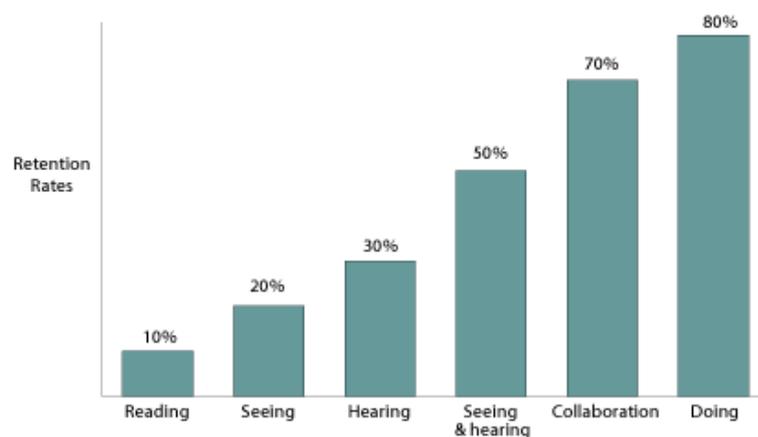
Not only will **TEACHING** improve how much you understand and remember, this learning technique improves how effectively you are able to apply and extend your knowledge; which is highly important in answering analysis-style questions, as well as worded applications. In addition, when trying to rephrase concepts in your own words, you will very quickly realise what you do and do not know, and therefore which sections of the course require greater attention.

Learning in this manner will also **decrease study time by at least 5 fold**.

This means that you will **commit 5 times more** information to memory in any set period of time!

**Note:** In general, after 24 hours, people retain:

- 10 percent of what they read or re-write (typical learning techniques adopted by students)
- 20 percent of what they hear (audiotapes)
- 30 percent of what they see (flip-charts)
- 50 percent of what they hear and see (as in the case of school classes and revision lectures!)
- 70 percent of what they say and discuss.
- 80 percent of what they say and do (i.e. questions & teaching).



Source: M. Chi, M. Bassok, M. Lewis, P. Reimann, & R. Glaser,  
"Self-explanations: How to Study and Use Examples in  
Problem Solving." *Cognitive Science*, 1989, 13, pp. 145-182.

**Note:**

Unless you possess a photographic memory, 100% knowledge retention can only be gained with regular and structured reviews!

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## A Foolproof Approach to Committing Knowledge to Memory

**Step 1:** Read through all the major headings and subheadings in your chosen set of notes, topic or chapter **OUT LOUD**.

### *Why is this important?*

Information is easier to learn and retrieve if it is organised in some structured manner. In addition, the learning process is more effective when we link new information to information that is already known. By reading through the headings and sub-headings, you are forming a scaffold to which new learning can be attached.

**Step 2:** Read through a small section of the notes (no more than 2 pages at a time) **slowly** and **out loud**. Take the time to **understand** the materials that you will be committing to memory. This will ensure that you have a global overview of the topic, as well as an understanding of how principles relate to one another.

### *Why is this important?*

We should always learn the general concepts before concentrating on specific details. Learning sessions should commence by producing/reviewing a general framework or overview. Once the general concepts are understood, the specific details will make more sense, and will be significantly easier to commit to memory. By seeing how the smaller details relate to one another, you will also process the information more deeply (which helps you store, and later retrieve, it from memory).

**Step 3:** Read the first paragraph **out loud**, and then see how much you can recall.

Rephrase what you have read in your own words and **out loud**. If this is not possible, break each paragraph into smaller sections. Read the first sentence **out loud** then rephrase what you have read in your own words. Read the second sentence **out loud** and then rephrase what you have read in your own words. Continue in this manner until you reach the end of the paragraph. Then read whole paragraph and rephrase what you have read in your own words - **out loud**. At this stage, you can be sure that you fully understand what you are learning and that you are well on your way to committing this knowledge to memory.

**Step 4:** To keep knowledge in long term memory, read your materials **out loud** and rephrase in your own words at least once within the next 3 days. This will keep the knowledge you have learned in your long term memory for at least 1 week.

**Step 5:** To further engrain information into long term memory, read through each set of notes on a regular basis. Difficult sections should be reviewed each week and until such time that the material is well understood. After that, review materials once each month (difficult materials) or once each school holiday period (materials you are confident with).

Remember – the more times you review information – the more thoroughly it will become engrained into long-term memory and the higher your test/examination scores!

Regards,  
The Team at TSFX.