

Retrieval

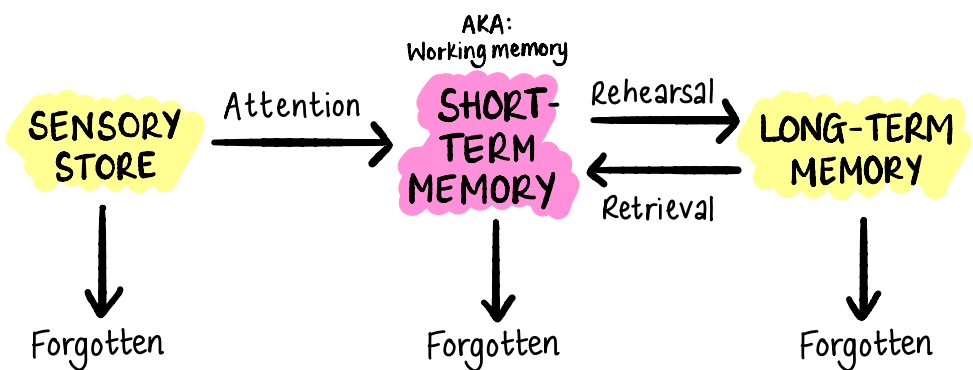
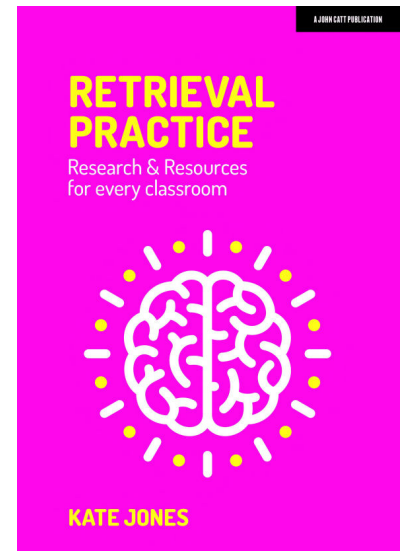
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Practice

The act of recalling learned information from memory (with little or no support) and every time that information is retrieved, or an answer is generated, it changes the original memory to make it **STRONGER!**



THE MULTI-STORE MODEL OF MEMORY BY ATKINSON & SHIFFRIN (1968)

Peterson & Peterson (1959)

→ Almost all information stored in short-term memory that is not rehearsed is lost within 18 to 30 seconds!

‘Using your memory shapes your memory’

RETRIEVAL STORAGE

→ how well information is embedded in long-term memory

RETRIEVAL STRENGTH

→ how easily a piece of information can be brought to mind when required

Learning = a change in long-term memory
‘if nothing has changed nothing has been learned’

Meaningful learning is about producing organised, coherent and integrated mental models that allow people to make inferences and apply their knowledge. (Karpicke, J. 2012)

THE BENEFITS:

- ① Retrieval practice aids later retention
‘every time you retrieve a memory it becomes deeper, stronger and easier to access in the future’
- ② Testing identifies gaps in knowledge
- ③ Testing causes students to learn more from the next learning episode
- ④ Testing produces better organisation of knowledge



- ⑤ Testing improves transfer of knowledge to new contexts



- ⑥ Facilitates retrieval of material that wasn't tested



- ⑦ Improves metacognition



- ⑧ Prevents interference from previous material when learning new content



- ⑨ Provides valuable feedback to teachers



- ⑩ Regular testing encourages students to study more



Retrieval Practice Principles (TOM SHERRINGTON)

① Involve everyone in the retrieval practice and review process

‘Good techniques involve all students checking their knowledge.’



② Make checking and correcting accurate and easy to do

‘The best person to mark the test is the person who has just took it.’

- Dylan William



③ Specify the knowledge

‘It’s better if students know the set of knowledge any retrieval will be based on, so they can study, prepare and self-check.’



④ Keep it generative

‘Students need to explore their memory to check what they know and understand. This means closing the books and making students think for themselves.’



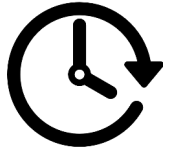
⑤ Vary the diet and mix it up

‘This will allow students to explore their schema in different ways, strengthening future recall.’



⑥ Make it time efficient

‘A good technique can be used repeatedly in an efficient manner, without dominating whole lessons.’



⑦ Make it workload efficient

‘The best methods do not involve the teacher checking the students’ answers, creating unsustainable workload.’



‘The closer you are to forgetting a piece of information, the more likely it is that you will benefit from revisiting it.’

BUSH & WATSON (2019)

Retrieval Practice in the Classroom

① Retrieval Practice Placemat

Example questions:

- What keywords did you use last lesson?
- State 3 key facts from last lesson.
- Explain a key concept from last lesson.
- Ask your partner 3 questions based on the content covered this term.

② Brain Dumps

- Dumping as much information from the brain about a specific topic
- Low effort, HIGH impact!

③ Cops & Robbers

- Cops - students write as much as they can from memory about a certain topic.
- Robbers - students get out of their seats, sharing and stealing ideas from their peers.

④ Retrieval Grids

- A grid with a range of questions that vary in the level of difficulty.
- Each question is worth a certain amount of points. The points increase with the level of difficulty.

⑤ Flash Cards

- How effective flashcards are depends on how they’re USED!
- It is important that students consciously recall the answer to the question on their flashcards, either verbally or through writing.

⑥ Flashback Friday

- As an end of lesson task on a Friday ask students to create a series of 5-10 questions based on the lesson content.
- Students answer these a week later.