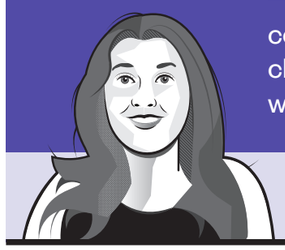
ONE-PAGER DESIGNED BY JAMIE CLARK | @XPATEDUCATOR



> Retrieval practice, like exercise, must be consistent, regular and the level of challenge should be appropriate with desirable difficulties.

KATE JONES

RETRIEVAL PRACTICE

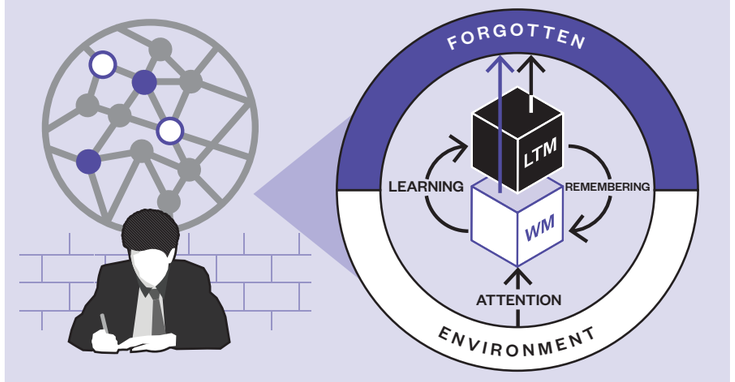
USING YOUR MEMORY, SHAPES YOUR MEMORY

RETRIEVAL PRACTICE

RECALL LEARNED INFORMATION FROM MEMORY

Retrieval practice is a learning strategy where learned information is recalled from memory. The act of retrieving information boosts learning as we are challenged to think about what we know. This process not only identifies gaps in knowledge, but strengthens our memory over time. We would like to think that once we have learned something, it stays with us forever. However, research shows that unless we retrieve it from long term memory from time to time, we tend to forget what we have learned. As a learning strategy, retrieval practice enables learners to revisit what they have learned, ensuring it is not forgotten and can be used as a foundation for further learning.

THE SIMPLE MEMORY MODEL BY DANIEL WILLINGHAM



E — **ENVIRONMENT AND ATTENTION**
To learn something, students must first pay attention to it. Attention brings information from the environment, into WM.

WM — **WORKING MEMORY**
The working memory is limited. If it is overloaded, successful learning will not take place.

LTM — **LONG TERM MEMORY**
Students build networks of knowledge (schemas) in LTM as they select, organise and integrate new information.

L&R — **LEARNING AND REMEMBERING**
Students need to learn material multiple times and practise repeatedly to develop automaticity and solid mental models.

A LOW-STAKES LEARNING STRATEGY

The emphasis of retrieval practice should be on regular low-stakes retrieval practice conducted to support learning, not measure it. Successful implementation of retrieval practice involves:

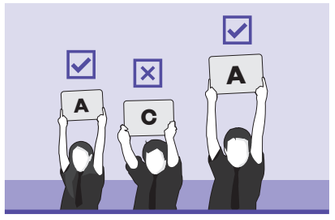
FEEDBACK: Following retrieval practice, get students to review their notes to help rectify any misconceptions. Give valuable feedback on knowledge gaps by reviewing the concepts and cold calling students.

SPACING: Engage in brief, spaced-out retrieval practice sessions to challenges memory and enhance long-term retention. Break content down into shorter lessons and distribute them across several days.

INTERLEAVING: Make students switch between different topics, problems or skills to compare and contrast strategies and approaches. This helps students problem solve a range of material.

THE KEY PRINCIPLES
TOM SHERRINGTON

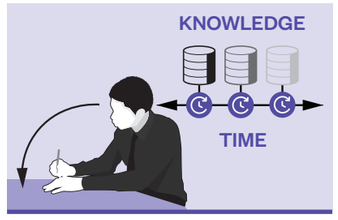
1. **INVOLVE EVERYONE**
   Engage ALL students in checking their knowledge.
2. **MAKE CHECKING ACCURATE AND EASY**
   Make it easy for students to check and evaluate their answers.
3. **SPECIFY THE KNOWLEDGE**
   Clarify the specific knowledge being tested to support preparation.
4. **KEEP IT GENERATIVE**
   Encourage students to rely on memory, avoiding supports.
5. **MAKE IT TIME AND WORKLOAD EFFICIENT**
   Keep it simple so it doesn't take too long and require marking.



STRATEGY 1

USE A VARIETY OF LOW-STAKES QUIZZES

Quizzes and practice tests aid students in assessing their grasp of recently learned material, highlighting strengths and areas for improvement. Relying solely on strategies like re-reading can lead to an inaccurate self-assessment of knowledge. Doing quizzes immediately after a lesson and revisiting the content regularly throughout the year enhances learning. Try simple paper quizzes or whole class 'show me' quizzes (using mini-whiteboards). Try tech tools (such as Quizizz) to get more nuanced data on all students.



STRATEGY 2

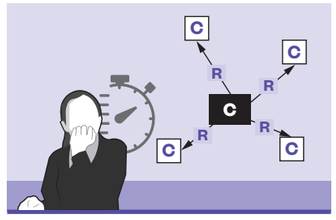
USE FREE RECALL AND SELF-EXPLAINING

Free recall (or brain dump) involves asking students to write down everything they remember relevant to your question (or the topic). Subsequently, you can ask students to compare their work to find gaps, similarities, and differences in their understanding. Similarly, self-explaining involves students pulling out information from memory and putting into words or a simple narrative. During this time, students generate their own interpretation of the material and make natural connections between ideas.

STRATEGY 3

INTERROGATE WITH 'HOW' AND 'WHY' QUESTIONS

Elaborative interrogation centers on improving memory retention by prompting students to generate 'how' and 'why' questions following learning. After formulating these questions, students explore potential answers that bring to light cause-and-effect relationships. For example, when studying the physics of flight, students might ask: 'How does the upward force (lift) work?', and 'Why does a plane need an engine?'. This engages students in the learning process, fostering a deeper understanding of the content.



STRATEGY 4

MAKE LINKS WITH GRAPHIC ORGANISERS

Concept mapping involves visually representing the relationships between concepts. Typically, a concept map includes two or more concepts ('C' above), a relationship descriptor ('R' above), and connecting directional arrows. By reading the map, learners form concise sentences. Concept maps help students assess their knowledge, identify gaps, and comprehend important relationships. Develop routines by modelling the mapping process. Over time, students should create maps in a quick, brain dump style before checking their answers against a reliable resource.

FURTHER READING: 'RETRIEVAL PRACTICE: RESOURCES AND RESEARCH FOR EVERY CLASSROOM' BY KATE JONES | '10 TECHNIQUES FOR RETRIEVAL PRACTICE' BLOG BY TOM SHERRINGTON