

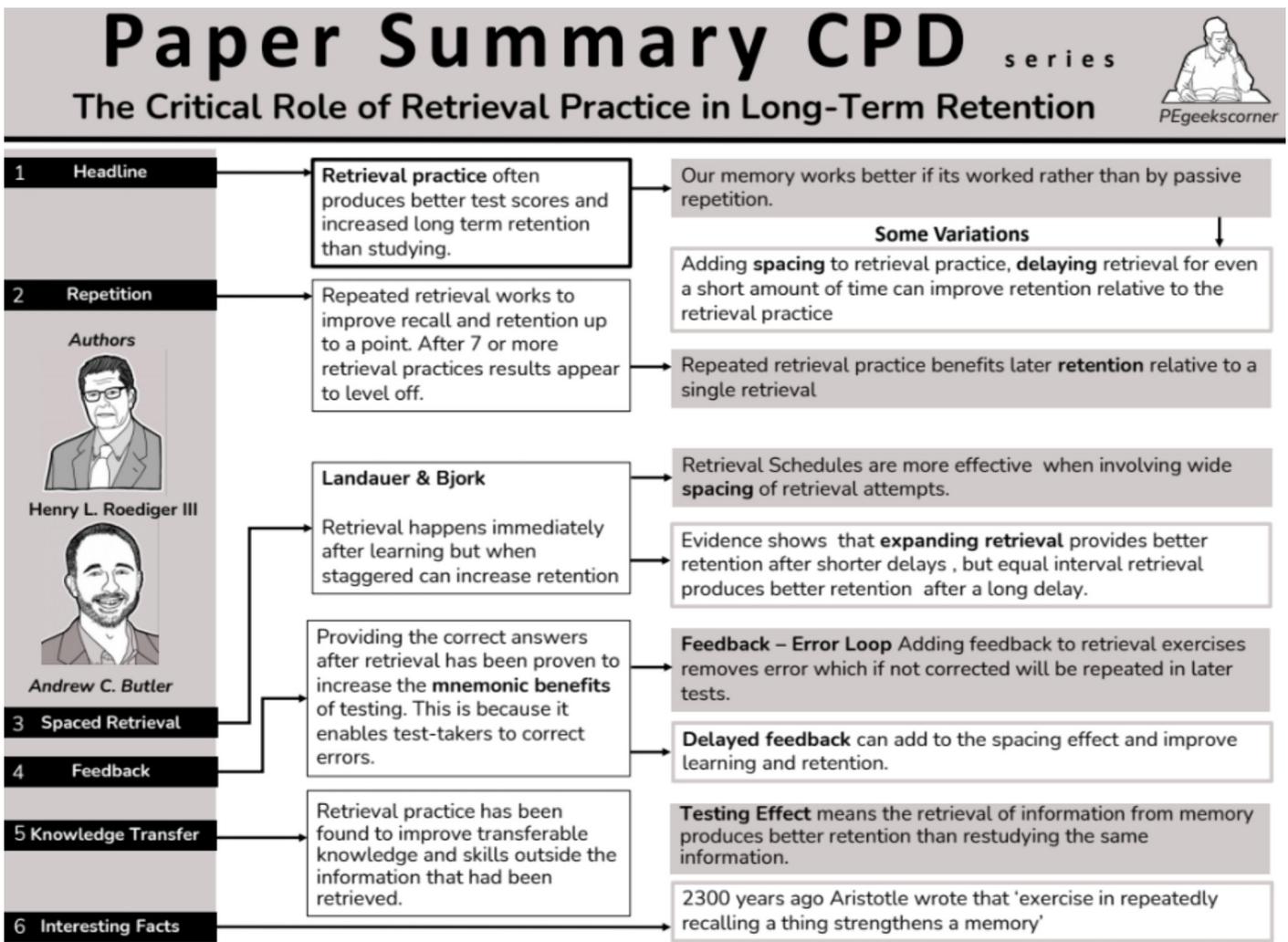
Retrieval Practice Strategies

Introduction

What is Retrieval Practice?

- Retrieval Practice is a strategy that relates to the act of recalling learned information from memory (with no or little support/scaffolding).
- For retrieval to be effective, it must be low-stakes or no-stakes (results do not need to be recorded or shared). This removes some of the pressure from the learner and makes them more willing to engage in the practice.
- There must be some element of feedback after retrieval to ensure that errors can be corrected by the learner (and the prevent them retaining these errors or misconceptions).

Retrieval 'in a nutshell':



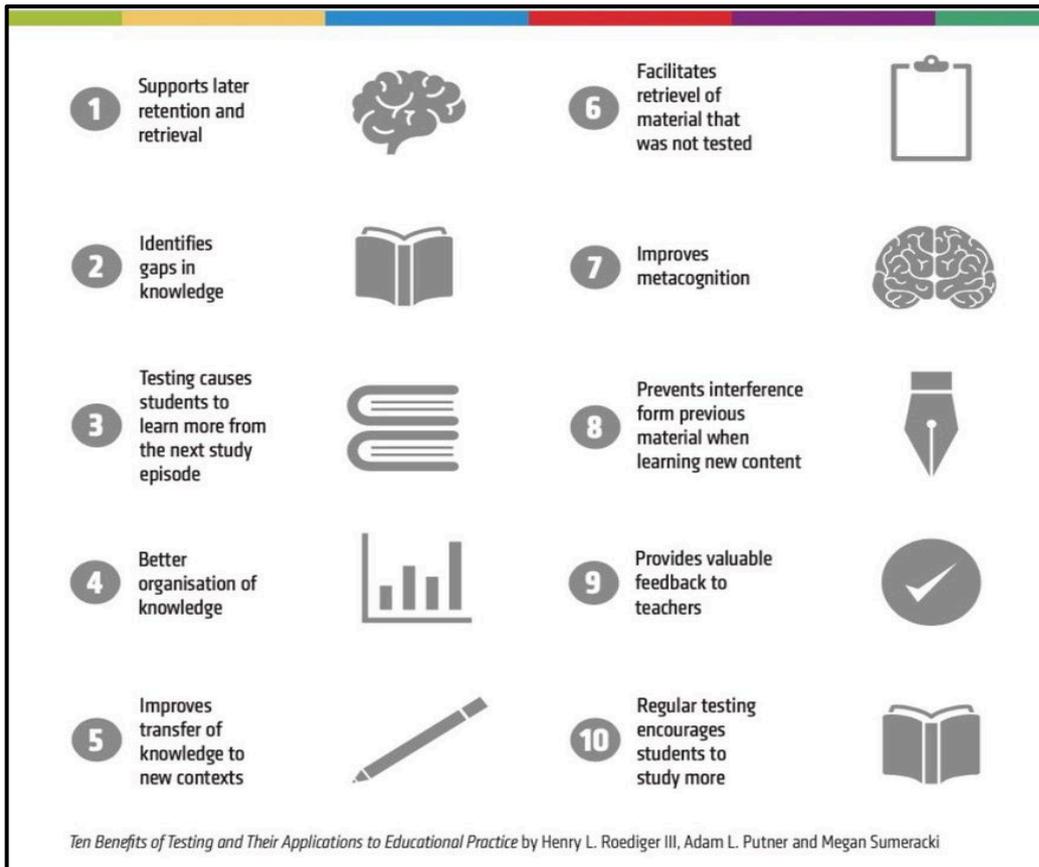
Credit: @PEgeekscorner

Why is Retrieval important?

Peterson and Peterson (1959) discovered that almost all information stored in the short-term memory that is not rehearsed is lost within 18-30 seconds. If we consider this in relation to the classroom, and also take into account Ebbinghaus' 'Forgetting Curve' (see March Research Summary Edition), this has drastic implications for our learners. Consequently, retrieval practice is vital if we want our pupils to retain information and to be able to build on this information in future learning experiences.

What are the benefits?

Studies suggest that there are ten key benefits to retrieval:



Credit: @katejones_teach

The benefits in more detail:

1. The retention of information is one of the most well-known benefits of retrieval practice. This retention helps to support academic progress as studies suggest that the more frequently you retrieve information, the easier it becomes to recall and the more it is strengthened for access in the future.
2. Gaps in knowledge can be filled as both teachers and the learner can see where gaps lie. This helps with our future planning as well as allowing learners to see where to direct their revision.
3. Testing causes students to be able to learn and retain more information in future learning experiences as it improves their understanding of content.
4. Learners experience better organisation of their knowledge within their schema as it improves their ability to transfer knowledge to new contexts.
5. As above, as learners have more understanding of content, and it is more accessible in their schemas, they are better able to transfer this knowledge to new contexts. This is essential in creating life-long learners.

6. Testing can facilitate retrieval of information that was not tested. By learners being tested on some information, other information linked to this in their schemas is also retained more easily and the knowledge strengthened.
7. Metacognition (*an intertwined network of knowing about and regulating our thinking*) is improved as pupils are able to self-monitor what they know and what they don't know *and* what they can do about it.
8. Testing prevents interference from prior material when learning new material. This means that by information becoming part of the long-term memory, it 'frees up' space for new learning to occur.
9. Testing provides feedback to us, as teachers, and allows us to be flexible and proactive in our planning to 'plug' gaps in knowledge.
10. Frequent testing can become a motivational factor in encouraging learners to study. As retrieval becomes part of classroom routine, learners become more likely to study and prepare for this when at home.

Tips for successful retrieval:

- Try to ensure learners practice retrieval without referring to their notes. This is crucial in ensuring pupils retrieve this information from their long-term memory.
- Pupils need to try to retrieve independently (if they have help from others, they won't necessarily be able to identify the gaps in their own knowledge).
- Use retrieval in a spaced manner to recap content from the previous month's learning all the way back to the start of the course (not just the previous lesson!).
- Keep it low stakes.
- Feedback must be carried out to improve memory of correct answers and to clear up any misconceptions.
- Pupils should be given opportunities self-mark their own retrieval practice as this ensures that they can self-monitor. They need to be aware of what they do know and don't know so that they understand what they need to study/revise.
- Explain the importance of retrieval to pupils (use the analogy from the March Research Summary Edition) as this will enable them to understand why it is important and will make them more likely to use it in their own intended study.

Strategies you could use:

Retrieval Practice Placemat

These are easy to create and easy to use.

Due to their generic nature, they can be applied across a range of subjects and ability levels.



Know it all sheets

Learners are given a sheet to complete about a topic from memory.

These can have subheadings, boxes, and prompts to provide structure.

'Pick and Mix': Progressivism		3. Tell me 3			
1. What do you know about me?  Woodrow Wilson Theodore Roosevelt Samuel Gompers		Amendments from 1913-1920.			
2. Find and Fix the mistakes		Three Acts under Wilson (aside from amendments).			
Underwood-Simmons Tariff Act slashed tariff rates by 30% in 1914.		Facts about the 1916 Election.			
Federal Reserve Organisation was set up and all national banks had to 1 of 15 Regional Reserve Banks.		Facts about America's entry into World War.			
Nearly 150 antitrust cases were brought forward with the Clayton Antitrust Act (1914).					
There were 2 million children under 18 known to be in work and often deprived of education. It barred goods made by child labour from inter-state commerce.					
In 1913, coal miners went on strike in Selma, Alabama. The company refused their demands and evicted workers from company housing. Colorado National Guard was called and 28 people were killed. Wilson sent in federal troops to break up strike and restore order.					

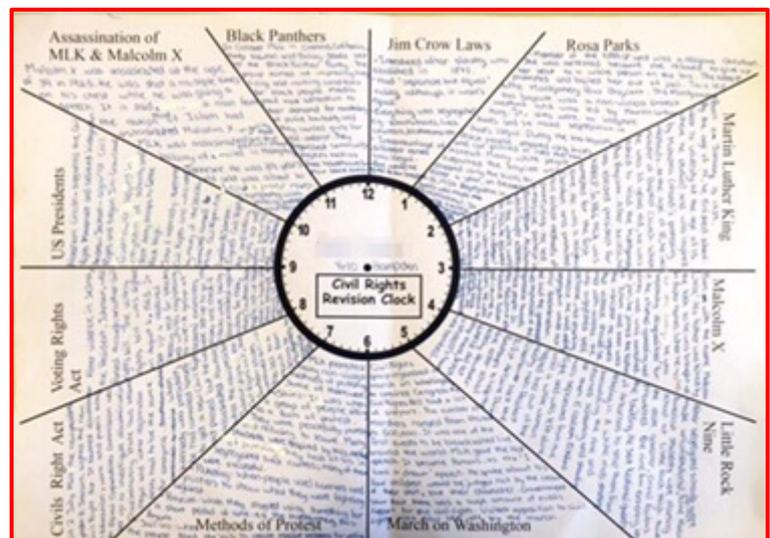
Credit: @MrAWGordon_

Retrieval Clocks

The main topic goes in the clock face and each five-minute segment is dedicated to a subtopic.

Learners then spend five minutes per segment filling in everything they recall about that topic. This will allow learners to see where their weaker areas of recall are, and they will be able to establish which sections they struggled with the most.

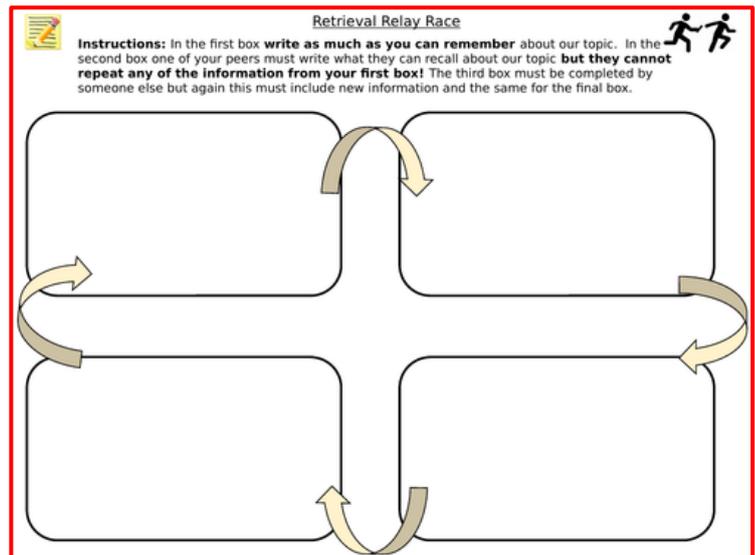
This structure can be adapted to your purpose and each segment could have a specific question that needs to be answered rather than being generalised. You can also chunk segments into longer stretches of time. Either way, it can be useful to have learners colour-code the segments afterwards as a form of self-monitoring; red for tricky areas, amber for 'getting there' areas and green for confident areas. This would allow you and learners to see a 'snapshot' of areas to return to.



Retrieval Race

This is a collaborative retrieval exercise.

Learners are given a sheet with a certain number of boxes (you can choose what works for you). Learners have to complete the first box themselves writing down what they know about the topic. The next three boxes should be completed by other learners in the class on the same topic. The information in each box isn't allowed to be repeated. Using time limits is important.



Give me Five

Pupils have to state five of each aspect in the table.

	1	2	3	4	5
Give me five...	Urgent revision needed	Time to step up revision	You are getting there	Your revision is paying off	You are exam ready
Adjectives that you may use to describe Slim					
Small (micro-quotations) that could be used in an essay about friendships.					
Reasons why people dream in the novel					
Details about George and Lennie's dream					
Reasons that Curley's Wife can be viewed sympathetically					

Five-a-day Starters

Pupils are given five tasks to complete to start the lesson.

A range of tasks/question types can be used for this. For instance, you may have questions, key words to define, images to describe, key words to use in a paragraph, summaries to create or even events to sequence.

This can focus on one topic or could be a mixture of topics to carry out spaced recall of work from earlier in the term.

$4\frac{1}{4} \times 2\frac{3}{5}$	
The length of a side of an equilateral triangle is 4.52, correct to 3 significant figures. Work out the lowest possible perimeter of the triangle.	
Simplify $\frac{2x^2 - 3x - 20}{x^2 - 16}$	
Simplify $\sqrt{800}$	Simplify $3\sqrt{3} \times 3\sqrt{12}$
Find the equation of the perpendicular bisector of (6, 2) and (10, 10).	

References and Further reading:

Jones, K. (2019) *Retrieval Practice: Research and Resources for every classroom*, John Catt Educational Limited.

Peterson, L. R. and Peterson, M. J. (1959) 'Short-term retention of individual verbal items', *Journal of Experimental Psychology*, 59 pp. 193 – 198.

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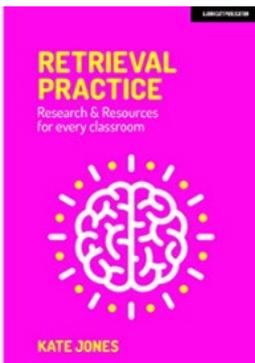
Useful Websites –

<https://teacherhead.com/2019/03/03/10-techniques-for-retrieval-practice>

<https://lovetoteach87.com/2020/09/09/a-collection-of-retrieval-practice-research-and-resources/>

Kate Jones' website contains many examples of retrieval practice with further links to useful blogs, strategies and explanations. She is a Head of Department, award-winning educational speaker and author. Both of her books below are excellent starting points to retrieval:

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ISBN: 978-1913622411

