WILDERN SCHOOL PROFESSIONAL DEVELOPMENT BULLETIN

THE ROUND

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SIMPLIFYING COGNITIVE LOAD THEORY

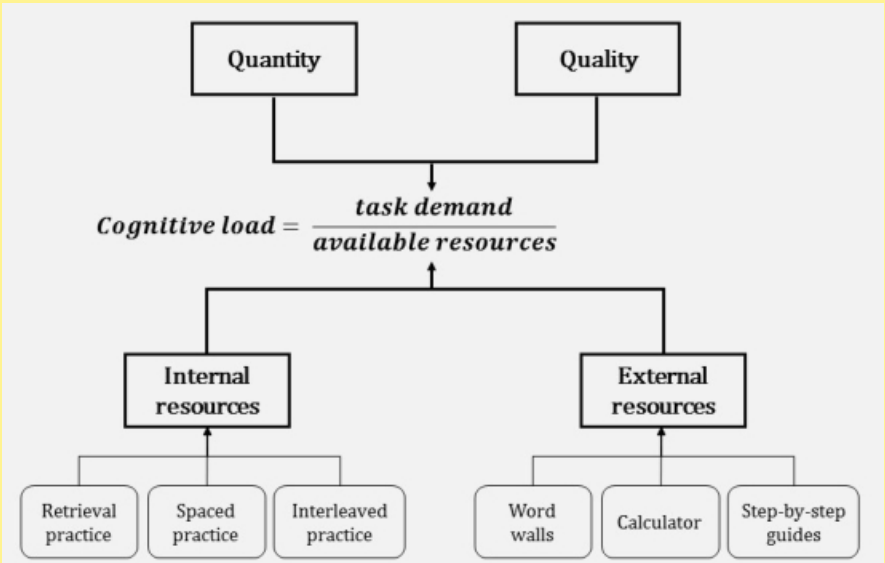
When discussing cognitive load theory, we can often get bogged down in arcane terms like 'germane load' and 'extraneous load', which – ironically – might create too much cognitive load if we have to keep reminding ourselves what they mean.

Frederick Reif, in his book 'Applying Cognitive Science to Education', tries to simplify the theory with the opposite.

You can see a full explanation of the image in Science teacher Adam Boxer's blogpost here, but it basically shows us that it can be seen as a simple equation: Cognitive load ***equals*** task demand ***divided by*** available resources.

Therefore, increasing task demand increases load, whereas increasing available resources decreases load.

It's worth reading the short blog for a more comprehensive explanation of the diagram.



THE PRIVILEGED

HOW STORIES HELP LEARNING

As an English teacher, a great deal of the topics I teach revolve around stories. The same is true of other humanities subjects too – History and RE are full of stories. This gives these subjects some added help when it comes to pupils' long term learning, as stories happen to have a privileged status in the processes of cognition and memory.

Cognitive psychologist Daniel T. Willingham suggests that more subjects should tap in to the learning potential of stories to aid long term memory:

"Research from the last 30 years shows that stories are indeed special. Stories are easy to comprehend and easy to remember, and that's true not just because people pay close attention to stories; there is something inherent in the story format that makes them easy to understand and remember. Teachers can consider using the basic elements of story structure to organize lessons and introduce complicated material, even if they don't plan to tell a story in class."

In an 'Ask the Cognitive Scientist' column for the *American Federation of Teachers*, he explains why stories are "psychologically privileged", and refers to the Four Cs (opposite) – the basic elements of story around which teachers might choose to organise lessons

Willingham says that stories have this privileged status because, as research shows:

a) they are more interesting and people are more likely to become engaged with them
b) they are easier to comprehend (mainly because they follow a format we already understand)
c) they are easier to remember (we remember about 50% more from stories than from expository passages), probably due to the causal connections between each part
d) our minds seek causal connections between things.

Whilst some subjects and topics lend themselves more readily to the story structure, it's worth experimenting with lesson structures so that they use the four Cs as a framework. Willingham suggests the most important C is **conflict** – we often use this when we generate interest by posing a problem to begin with.

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STATUS OF STORY

The Four Cs of Storytelling	
Causality	Events are related because one causes or leads to another. Whereas, “The King died and then the Queen died” presents events chronologically, “The King died and the Queen died of grief” links the events causally.
Conflict	In every story, there must be a goal and there must be obstacles that prevent the goal being met. In *Gone With the Wind*, the causal story might go, “Scarlett loved Ashley, so she married him”, but causality alone doesn’t make it a story. The obstacle in this story is that Ashley doesn’t love Scarlett, so she must take action to overcome this obstacle.
Complications	Now if a story was just a character trying to achieve their goal, it still wouldn’t be a very interesting story. So there must be complications that are created as the character tries to remove the obstacle. So when Scarlett discovers that Ashley doesn’t love her, she agrees to marry another man to make Ashley jealous. This creates further complications.
Character	Strong and interesting characters are vital to storytelling and it is important that the audience can observe them in action – rather than explaining who the character is, show it through the events.

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BLOGROLL

ARTICLES AND BLOGS YOU MIGHT FIND INTERESTING

'Useful bits and pieces for evidence informed teaching' is a blog post from Science teacher Adam Boxer, in which he has collected links to all of the most useful (short) pieces of writing that have helped him as a teacher. This is a goldmine of condensed research and theory on diverse subjects from behaviour to metacognition to Pupil Premium and everything in between.

'Comparative Judgement is a better predictor of marks than marking!' Dr Chris Wheadon left AQA a number of years ago to study for a PhD in assessment. What he discovered was a process of marking that is quicker than marking AND more reliable. Here, he summarises the recent Ofqual report, which concluded just how much more reliable CJ is. You can read more about CJ here.

'Major Teaching Myth: "Always ask before you tell…"' Tom Sherrington challenges a practice that may be familiar to us all.

If you want to know a little bit more about any of the ideas in this edition, please don't hesitate to email me – j.theobald@wildern.org – or come and find me in Block 9! James