# Teaching & Learning Newsletter

SUMMER 1 2021

**Summer is here! Well, apparently...it's blowing a gail as I write this but we do find ourselves at the beginning of the summer term. Our schools are back to being hubs of life and learning and so I hope that this newsletter will spark your interest, provoc discussions and further thinking in school and hopefully, recall some previous learning that will support you in continuing to deliver your curriculum in the best possible way. So that all our pupils across WeST make great progress and experience great teaching and learning that inspires and makes them think hard! As ever, I hope it's useful.**

**I would also like to invite you (if you are a tweeter) to follow @westcountryST to keep up to date with goings on across the trust and interesting educational, teaching & learning titbits. If you want to share something brilliant from your school don't forget to include us in a mention @westcountyST - we love a retweet.**

If you would like to contribute to the newsletter, or discuss anything T&L please contact me directly or via your in school T&L Lead.

**Online WeST Bitesize CPD is back on Tuesday 11th May...**

The next voluntary CPD session will be on **Tuesday 11 May, 16.00 - 16.45** via MS Teams. This time we'll be taking a whistle stop look at Cognitive Load Theory (CLT) and how knowing about it is vital to support the development of our pupils' Long term memory...we'll look at CLT recommendations for the classroom and highlight how it supports pedagogy such as Rosensine's principles of instruction. Please save this meeting link in your diary: WeST Bitesize CPD: CLT, Tuesday 11th May, 16.00 on MS Teams.

Hope you enjoy the read.

*Ruth*

**Ruth Woodhouse**
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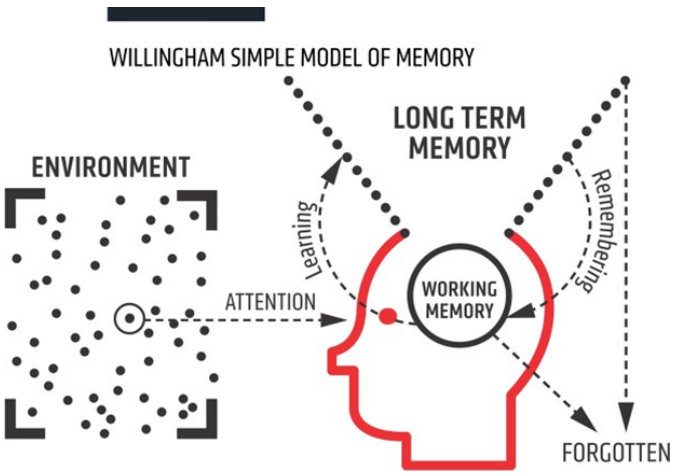
# Why does Cognitive Load Theory matter to memory

Back in 2017 Dylan William tweeted that he'd "come to the conclusion, Sweller's Cognitive Load Theory is the single most important thing for teachers to know." You can find the original paper published in 1988 here but I will also endeavour to summarise and share some practical implementation tips for the classroom.

Tom Sherrington suggests that if *"teachers are going to improve their practice, then it's essential for the ideas they are basing their thinking around to be formulated on a sound model...[teachers] are more likely to implement them well if they can formulate a mental model of learning that underpins the practice."* I agree, and it's why I believe every teacher needs to understand the science of learning, and be familiar with the learning model that has emerged from contemporary cognitive science. As so many pedagogical approaches we are now implementing, such as Rosenshine's principles of instruction and effective learning strategies such as retrieval, spaced practice and interleaving are supported by this learning model.




**What?** Cognitive Load Theory (CLT) is Sweller's theory of attention as it relates to education; the main principle is that we can only process a limited amount of information at one time, so we have to avoid overloading attention with unnecessary or extraneous material. The amount of information requiring our or our students attention is known as "cognitive load" and overabundance of it is known as "cognitive overload" (Sweller & Chandler, 1994)

**Why?** In a nutshell, if pupils (this is at any age or stage) can only process a limited amount of information at any one time, it is very important teachers are not overloading their attention. Which has implications for how we plan lessons, design presentations, write textbooks and give instructions.

**How?** The fundamental recommendation of CLT: **In order to increase learning, reduce extraneous load and optimise intrinsic load**. Oliver Lovell succinctly explains, "Our working memory (WM) is the bottleneck of our thinking"

**Intrinsic cognitive load** is the load associated with the core learning taking place; what we want pupil's WM to be occupied with

**Extraneous or Extrinsic Load** comes from the manner and structure of instruction, the effect of task design, the environment and draw's pupil's WM resources away from the core information to be learned.

**Top Implementation tips:**

- ★ Rosenshine's principles of instruction, generative learning* tasks, chunking and automating (routines) reduces the load of a task and eases the bottleneck
- ★ You can only think about something once it is brought to attention in the WM

**Reflection:** In each of your lessons what (material/knowledge) are you making important ? and HOW are you driving students attention towards it in your lessons? (See: The Increased Saliency Theory of Attention and the pop-out effect)

- ★ Instructional efficiency can be improved by removing extraneous load
- ★ Sometimes teachers need to reduce intrinsic load too, by chunking the task into manageable steps
- ★ Pre teaching (vocab/characters/timelines/key events/skills) and then revisiting and practicing over time can optimise intrinsic load

**Reflection**: Are the important concepts (as well as individual tasks) chunked, sequenced and revisited throughout your curriculum? How does your curriculum plan optimise intrinsic load?

- ★ Eliminate unnecessary information and do not replicate necessary information
- ★ When information is presented simultaneously in written and spoken form, both are vying for attention = Don't read from your slides!
- ★ Guided practice and worked examples optimise intrinsic load

**Want to think about CLT some more? Come along remotely to the next WeST Bitesize CPD session nn Tuesday 11 May, 16.00 - 16.45**

**MEETING LINK: WeST Bitesize CPD: CLT, Tuesday 11th May, 16.00 on MS Teams.**

## Further reading:


Oliver Lovell, *Sweller's Cognitive Load Theory In Action*

*Find out more about Generative Learning here:
https://researchschool.org.uk/stmatthews//what-can-generative-learning-look-like
https://teacherhead.com/2020/10/04/teaching-for-understanding-schema-building-and-generative-learning/

Or by reading Zoe and Mark Enser's *Generative Learning In Action*

Daniel T Willingham *Why don't students like school?*

Yana Weinstein and Megan Sumeracki's *Understanding How we learn (see in particular Chapter 6 for Attention, Cognitive Load, How to drive attention to learning)*

Arthur Simamura's *MARGE: A whole-Brain Learning Approach* (The Free downloadable book in PDF is here )

# What does effective independent practice look like

You may be familiar with Malcolm Gladwell and his book Outliers, in which he suggests that it takes "10,000 hours of practice" to become an expert, the rule is based on research by psychologist Anders Ericsson. Whether 10,000 is actually the magic number is up for debate...but what Ericsson did make a point of emphasising is that not just any old practice counts towards the 10,000-hour average. It has to be deliberate, dedicated time spent focusing on improvement.

Explicit, deliberate guided practice and independent practice is now a common feature of WeST schools model of teaching and underpinning principles and pedagogy to ensure quality curriculum delivery for all learners.

The I Do, We Do, You Do model captures the essence of explicit teaching and relies heavily on teachers specifically planning practice - both guided and independent into their lessons. Using your professional judgement and data gathered throughout the lesson (via CFU, questioning, sampling, testing) to manage the gradual release of responsibility to students - when it is appropriate and confidence boosting to do so.

As Rosenshine explains...

*" In a typical teacher-led classroom, guided practice is followed by independent practice-by students working alone and practicing the new material. This independent practice is necessary because a good deal of practice (overlearning) is needed in order to become fluent and automatic in a skill. When material is overlearned, it can be recalled automatically and doesn't take up any space in the working memory."*

**Implementation Top Tip**: **Independent practice should be a confidence boosting moment!** Not too soon, not too late...don't rush to get there. Secure a high success rate for the learner first (Rosenshine suggests 80% is about right)

Tom Sherrington takes us through the 5 stages of independent practice in his book #walkthrus which I will summarise below. Are these regular features of your lessons? Use this checklist to discuss and reflect on your lessons with colleagues in school.

**How to do...Independent Practice by:**

1. Securing guided practice

   *Make sure pupils are confident with the material during guided practice, how will you check this is the case? Plan the questions you will ask, model the evidence you will need to see in books, continuously monitor guided practice..*

2. Remove scaffolds and initiate practice*

   *You must use the same material featured in guided practice for independent practice. Rosenshine proposes it would be 'inappropriate' for students to independently practice material that was anything other than slightly varied/extended/elaborated from that used during guided practice. Pupils must be fully prepared.*

   *click on the link to rewatch WeSTs Bitesize CPD session on Scaffolding and fading the support

3. Check and feedback

   *How will you evaluate the success of a student's independent practice? Unchecked independent practice can result in drift from the expected standards or a slowing down in the rate of improvement.*

   - *Set the conditions (time allocation/silence/books closed/whole class feedback/formative checkpoints/provide a framework/peer talk)*

4. Reduce guidance over time

   *Make it explicit that a key element of independent practice is that pupils' self-evaluate the quality and success rate of their work.*

   - *How are you expecting them to do this? Have you modelled how students should use answer sheets, success criteria or worked exemplars to self evaluate? Do not presume students' will know how to do this.*
   - *Fully independent performance will only be achieved when pupils can self-diagnose the gaps in their learning and take steps to address them.*

5. Increase challenge over time

   *Plan independent tasks with increasing levels of challenge e.g attempting more synoptic questions, spanning multiple concepts, more abstract problems, more extended writing, increasing pace or stamina in performance.*

   - *Have you mapped out the steps of increasing challenge in advance? This should directly correlate to the curriculum sequencing and topic/unit ultimate learning goals.*

**Implementation Top Tips:**

- ★ Independent practice should include the same material as guided practice
- ★ Teachers should model the independent practice work to the whole class first
- ★ Teachers should continuously monitor and check in on independent practice ** if you have to keep stopping and explaining/answering questions/re modelling STOP! the guided practice has not been effective and you have moved to independent practice too soon
- ★ Independent practice doesn't have to be solo and in silence, it can involve collaborative learning activities with peers and a provided framework
- ★ The more practice the better the performance - don't rush it

**Further reading:** Check out this 60 minute self directed study session on Independent Practice from our Early Career Framework providers Teach First. The session includes videos, reflection points and scenarios that explores:

- Why is independent practice important?
- Planning the right practice activity
- Providing further guides and scaffolds
- Using collaborative practice to best effect
- Gradually removing scaffolding

Teach Like a CHAMPION Read Doug Lemov's blog on engineering better practice here, he believes that effective independent practice "makes student's sweat" ... reflect on getting that perfect balance of stretch and support.

# The largest training programme for teachers in a generation begins this September

This September the statutory induction expectations for newly qualified teachers is changing and the Early Career Framework will launch. As of September 2021, NQTs are no more and will be henceforth, known as Early Career Teachers (ECTs). ECTs will be entitled to 2 years of support and development and a dedicated in school mentor that will lead weekly cycles of instructional coaching. Although not an assessment framework, the Early Career Framework is an entitlement. ECTs will engage with high quality resources, supportive professional development and a network of peers. The ECF is also a great opportunity for mentors who are passionate and enthusiastic about teacher development and believe in using instructional coaching to improve and implement great practice.

WeST will be partnering with our local Teaching School Hub, SWIFT and one of the nationally commissioned providers Teach First.


If you want to understand more about the ECF and how we will be launching this programme you can come along to the below online briefing..

**What: WeST & the ECF remote briefing**
When: Monday 10th May, 16.00 - 16.30
Who: Headteacher/SLT/ECT Lead (current NQT lead/
How: MS Teams Meeting link
Lead: Ruth Woodhouse, rwoodhouse@weststst.org.uk

I would also encourage you to take a look at the core programme resources found here . The ECF curriculum on offer is high quality and freely available to all, not just ECTs... so why not take a look.

Interested in becoming an ECT Mentor? Find out what's expected, if it's right for you and ask any questions...

**What: Becoming an ECT Mentor**
When: Tuesday 25th May 16.00 - 16.30
Who: perspective ECT mentors/ECT Leads
How: MS Teams Meeting Link
Lead: Ruth Woodhouse, rwoodhouse@weststst.org.uk

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