

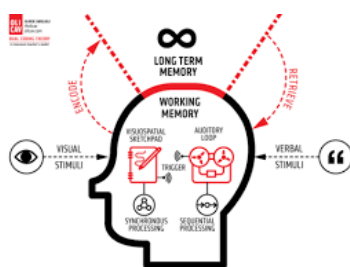
## Where are we with Cognition, Memory and Learning?



### In this issue:

- Cognition & Memory
- Training New Teachers
- Being a Mentor
- Retrieval Practice

In the last year we have seen more and more attention paid to how children learn with a particular emphasis on memory and cognition and areas such as dual coding and cognitive load. This link to neuro-science is most welcome but the challenge remains how do we translate this into the classroom? A recent article by Rob Coe (*Impact, Spring 2020*) asks how research on retrieval practice can help our teaching but also warns of the dangers of an over reliance on laboratory research that is not always classroom based.



For instance, we used to talk about ‘re-activating prior learning’ and now we are emphasising how we develop long term memory so that recall is strong. ‘Low stakes’ testing is suggested as helpful in this but is there a danger this merely focuses on ‘relatively, simple verbal materials, including word lists’? There have also been cases of schools insisting that all lessons start with a quiz. We need to be clear when quizzes can be useful and what they achieve. They are just one of many techniques we could use.

High repetition overlearning can be extremely effective as seen in early phonics teaching and also the demand for pupils to know their times tables by the end of year 4 falls into this category. But when it is less useful? This is the key. What techniques do we apply when? Steve Higgins has called this the Bananarama Principle: ‘It ain’t what you do it’s the way that you do it. (Higgins, 2018). So, there is our challenge. How do we use this research to improve our teaching and make sure the way we do it is effective?

## IMPACT

The latest Chartered College research journal, *Impact*, focuses on many of the aspects of teaching we have been looking at. There are articles on **Metacognition in Nursery** – using Learning Journeys to help young learners to reflect and remember their learning; **Early maths** – estimation stations, predictions and estimations; **Retrieval practice** – how does it translate into the classroom?; **Cognitive load** – do we give children too much information to process in one go?

*If anyone wants copies of these please ask.*



## IRIS Connect Lesson Recording

The HISP Research School is delivering training on Education Endowment Research and asked that we recorded some lesson segments to use. Many thanks to the teachers who have been recorded so far:

Year 1 maths | Year 1 phonics | Year 3 drama | Year 6 English | Year 6 booster maths

We hope to record more in the future which we can also use for our own Inset and training of students and School Direct trainees

# Why do we Train so Many Teachers?

The first answer is because we are so good at it. Given the strength of the teaching we have it is only right that we are at the forefront of training the next generation of teachers. It is part of a professional duty. Since we have a culture built upon coaching and development is natural that this includes trainees. Hosting a student allows teachers to develop their coaching and mentoring skills which is also good leadership training. Many of these skills are transferable.

Hosting a student also ensures we continue to reflect upon our own teaching: we cannot expect trainees to do things if we are not modelling that ourselves. It makes us think more deeply about what we do in the classroom because we want to clearly show this to the trainee. We can't encourage a trainee to be a self-reflective practitioner if we are not one ourselves.

## Benefits of being a mentor

- Improve communication & personal skills
- Develop leadership & management qualities: coaching & mentoring
- Reinforce study skills & knowledge of subject(s)
- Increase confidence & motivation
- Opportunities for booster teaching of groups in own class
- Extra release time for other areas such as subject leadership

## Who do we host?

We host students and trainees following different routes:

**PTSA School Direct**  
programme

**Southampton University**  
**PGCE**

**Winchester University B.Ed**

**CACHE Early Years**  
programmes

*Good or better learning for every  
child, for every lesson*

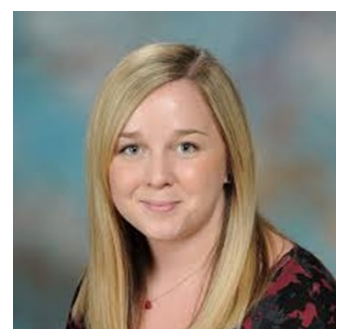


## SCHOOL DIRECT PROGRAMME Primary Teacher Training



“ Mentoring a School's Direct trainee was a rewarding and inspiring experience. Being able to be a part of someone's early teaching career and supporting them through their training was such a positive for me. This in turn encouraged me to become more reflective and therefore proactive in adapting and improving small details of lessons and outcomes that impacted on the progress of the class.

An unexpected but welcomed outcome was being able to learn about my children in ways I never could have without my trainee there. I was able to step back more frequently to observe and understand their individual learning and alter my teaching to reflect their needs much more closely.



*Sarah Mack, AVP, Tanners  
Brook*

The experience taught me that this relationship can also make everyone involved more productive, especially the children, and ultimately can create a working and learning environment that everyone can thrive in. It was this that was essential and made our journey so successful - two teachers improving and learning together

”

## What do Current Mentors Say?

### George Marshall, Year 3 Teacher at Tanners Brook

I was pleased to be given the opportunity to be a mentor. I felt I had to be the best version of myself to provide a strong foundation for my students' career. I seriously reflected upon my own practice and made changes that I may not have otherwise considered. I took risks which improved my teaching. I observed teaching and learnt about my own practice. I had professional dialogues about mentoring with senior staff members and grew as a professional. I was able to watch my student grow and succeed, proud that I was a contributor to their development, even though it was hard work. I hope that I have, in a small way, given back to the profession I love.



### Emily Iszatt, Year 3 Teacher at Portswood

It makes you reflect upon what you are doing. It also provides the chance to stand back and watch your class. You can give extra attention and support to some of the pupils who may need it. The extra adult in the room is useful when used well.

At times it can be hard, particularly handing over some responsibilities when you want every lesson to go well. The students need to learn from their mistakes, but it is a challenge to not do too much for them.

I have learned that students are as much an individual as the children in your class. You need to personalise your style of mentoring and adapt how you explain things. I try to use developmental questions and encourage them to find that out about what to do. I talk through my thinking for them such planning the day ahead, including practical steps such as the importance of having resources ready.

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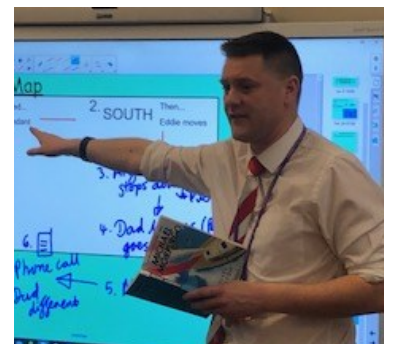
*"If a teacher was considering hosting a student I would say. 'Go for it!'. I really enjoy the experience"*

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### Craig Wilson, Year 5 Teacher at Tanners Brook

I have really enjoyed the experience of hosting a student. I loved the opportunity of being able to stand back in lessons that my student was teaching and watch the various class dynamics and interactions. Especially valuable was the learning conversations, that I both heard and was involved in, that I might not have noticed had I been teaching the whole class.

Another particular benefit was that it forced me to analyse my own practice and think carefully about my impact on the children's learning.



When giving feedback and support to my student and when I set targets, I felt it important to model what I was looking for so that she could progress with her teaching practice. Furthermore, I realised early on never to assume the student knows all the tricks of the trade; things that I would do as a matter of my normal practice; from giving and recording verbal feedback to behaviour management strategies need to be taught and the student supported with this. Although at first I was apprehensive about having a student and the extra workload it might bring, I found it a thoroughly rewarding experience and one that I would relish the opportunity of doing again.

# Retrieval Practice

How can we use it?



*'They don't seem to be able to remember it!'*

How often have we said that as a teacher? So what can we do to help children remember? One good example is the maths meeting used in Year 1 at Portwood. In these 5 -10 minute sessions at the start of a maths lesson the whole class revisit key Year 1 learning as well as things taught from last week or things that are in danger of not being taught for a while.

In the example Smartnotebook slide below you can see days of the week as we might see in Early Years followed by time questions - since we teach time rarely but need it constantly. Number bonds are displayed as well as a revision of 'heavier' from the previous week and then a subtraction problem that will be solved using a number line. Pupils sometimes answer on whiteboards, sometimes speak to a partner and often come out and use the board interactively such as to model the use of the timeline. We have different versions of this in other year groups and 'Think Pink' tasks can also do this. We have a recording of these Year 1 sessions if anyone would like to watch it. Thank you to Lindsey Dyde for providing the example below.

## Maths meeting

Yesterday was \_\_\_\_\_

Today is Thursday

Tomorrow is \_\_\_\_\_

Number bond to 10  
match up!

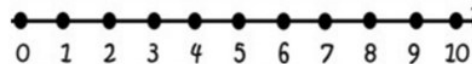


6	9
8	7
1	4
3	2

## Which is heavier?



There are 8 fishes in the tank.  
5 swim away. How many are left?



There could be a danger if in every lesson we spend a long time on going over previous content. We would get very good at remembering those bits but not have time to learn anything new! But how do we retrieve knowledge in foundation subjects if we do not get the chance to revisit it? That's is why chronology lessons are useful in all history units because they can recap previous units. Maps are also vital to remember key geography knowledge. MFL is often best taught in small chunks such as counting in French or using French colour names whenever colours come up. Looking for opportunities to remember key knowledge requires some planned sessions such as the maths meeting but also making links in learning when they appear.

What about a short Friday afternoon quiz on what we learned this week? Or a half termly 'look at your science book and ask a friend three questions'? Or in Early Years getting the children to use their learning journeys to tell someone what they did and what they remember from last week and last term? Let's not forget how our classroom can help with retrieval practice. Are those displays helpful for learning or are they merely wallpaper?

**FURTHER  
READING**

Make it Stick: The Science of Successful Learning by Peter C. Brown

