

Releasing POTENTIAL



THE ST. BART'S
ACADEMY
TRUST

Autumn Term 2020





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Releasing Potential Together

Welcome

Here at BTSA we are passionate about providing St. Bart's Multi-Academy Trust staff with professional development opportunities that are engaging, purposeful and relevant to specific roles. Our offer is built around the DfE Career Progression route map supporting professionals on their journey from being a novice to becoming an expert.

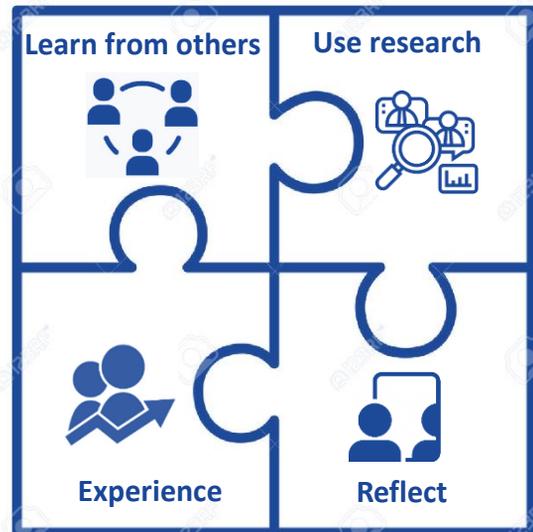
Our course delivery provides participants with opportunities to:

- **Learn from others** through collaboration and networking
- **Use research** from trusted sources with proven results
- **Reflect** on current ways of working and consider new opportunities
- **Experience** a range of strategies and ideas to take back into school

Through these opportunities we hope you will be able to **Release Your Potential** and the potential of the children in your care as we support you throughout your career.

Inside this issue you will find articles covering a range of themes. We hope you find it useful.

The BTSA Team



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Learning Online

Remote Professional
Development





Recent world events have resulted in a global change in the way people are working, including arrangements that support the continuous professional development of staff. John Collier explains changes made by BTSA.

“After many years of providing face to face training and support to staff across the St. Bart’s Academy Trust we found it was time to seek alternative provision for colleagues.

“To begin with we felt it was important to share links to free remote training courses and resources. Research articles from the Chartered College of Teaching *IMPACT* magazine were also collated and shared. These were grouped under key themes meaning staff could quickly identify their own areas of interest.

“We have also developed a suite of professional development programmes covering a range of topics linked directly to the Teachers’ Standards and more. These modules contain short videos highlighting practical strategies for the classroom and a range of additional support materials including links to research and evidence.

“In the Autumn Term restrictions meant that Hub sessions needed to be replaced by online meetings using Zoom. This was a learning curve for us but one that we feel we have navigated successfully. Programmes, courses, network meetings have all been facilitated in this manner and the response has been very positive. Reassuringly this new way of working is in line with the recent report on remote CPD by the Education Endowment Foundation.”



BTSA online

BTSA offer a suite of online professional development programmes exclusively available to St. Bart’s Multi-Academy Trust employees.

- Release your potential
- Guide your own learning
- Designed to fit around your schedule
- Apply research to practice
- Support colleagues to improve
- Access videos, accompanying slides and classroom resources

Adapt Teaching	Challenge and Stretch	Coaching Ambassadors	CPD Excellence	Curriculum Design	Developing English
Difficult Conversations	EAL Support	Early Career Programme	Effective Classroom Support	Effective Questioning	Growth Mindset
Learning To Lead	Lesson Study	Make Accurate and Productive Use of Assessment	Mark Less, Impact More	Metacognition and Beyond	Plan and Teach Well Structured Lessons
Promote Good Progress	Push Back The Goals	Reading and Phonics	Subject Leadership	The Science of Learning	Using Retrieval Practice

Our collection of online CPD is available to all staff at any time through the St. Bart’s Academy Trust Intranet –

<https://belgravestbartholomews.sharepoint.com/sites/St%20Barts%20Trust/SitePages/Training%20and%20CPD.aspx>



The EEF recently published a new rapid evidence assessment which shows that professional development for teachers can be effective when delivered remotely and lead to positive impacts on pupil outcomes.

The review, produced in partnership with Durham University, examined existing research from 17 systematic reviews and meta-analyses of the effectiveness of remote professional development. The review was commissioned to support school leaders to decide how to approach professional development in the 2020-21 academic year.

The findings show that whilst social distancing remains necessary, school leaders could consider delivering professional development sessions remotely, rather than delaying until face-to-face training becomes possible again. Remote coaching and mentoring can improve the skills and knowledge of education professionals, with the added benefit that it is both cost-effective and time efficient.

The study highlights that it is how remote professional development is delivered and the support that goes with it that matters. School leaders can support staff to prioritise their professional development by creating protected time within the working day for staff to engage with sessions or learning materials.

Setting clear objectives for professional development sessions and clarifying roles and expectations also help to maximise the benefits of remote professional development. Additionally, schools should ensure that staff members have access to the technology required for sessions.

The review also explains that a blended approach to professional development sessions can help to establish a sense of cohesion amongst staff members.

Combining remote professional development sessions with coaching from colleagues can help to mitigate feelings of isolation that might result from limited social contact with other adults at school due to social distancing.

Other findings include:

- Remote coaching, mentoring and expert support can be effective alone or as part of broader professional development programmes.
- Making remote content interactive maximises its benefit in terms of teachers' knowledge and skill acquisition. Spaced approaches enable ongoing interaction with professional development content.
- The use of video is identified as a particularly effective element of professional development that enables teaching staff to review their own and reflect on others' actions in the classroom, although it should be paired with other learning resources rather than being used in isolation.

Professor Becky Francis, CEO of the Education Endowment Foundation, said, *“Professional development plays a critical role in maintaining high-quality teaching in schools. It provides opportunities for staff members to reflect on their practice and consider new approaches that could benefit their pupils.*

“This academic year, delivering effective training to staff members will require extra thought to ensure that it remains a meaningful use of teachers' time and complies with the social distancing guidelines that are in place to keep them safe.

“As our review shows, remote professional development sessions are not only effective means of improving pupil outcomes, but they also ensure that a sense of community and support endures amongst staff members in these unprecedented times.”

A close-up photograph of a hand holding a yellow pencil with black stripes, writing on a blue grid-lined notebook. The pencil is positioned vertically, and the hand is in the foreground, slightly out of focus. The notebook is open, and the grid lines are clearly visible. The background is blurred, showing a person in a blue shirt. The overall scene suggests a focused learning or writing environment.

A New Approach

Remote self-paced Maths CPD
at Park Hall Academy

As part of their academy development work in Mathematics, Park Hall Academy have been liaising with the Stoke-on-Trent Mathematics Excellence Partnership (Stoke MEP) to access high quality CPD through White Rose Maths.

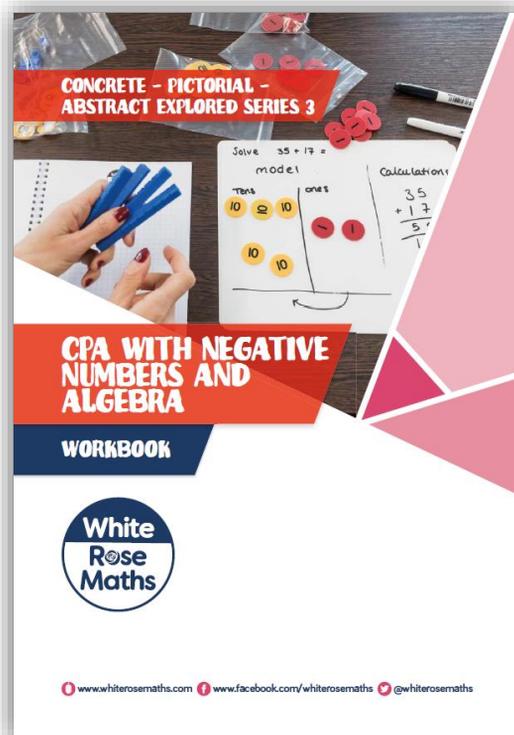
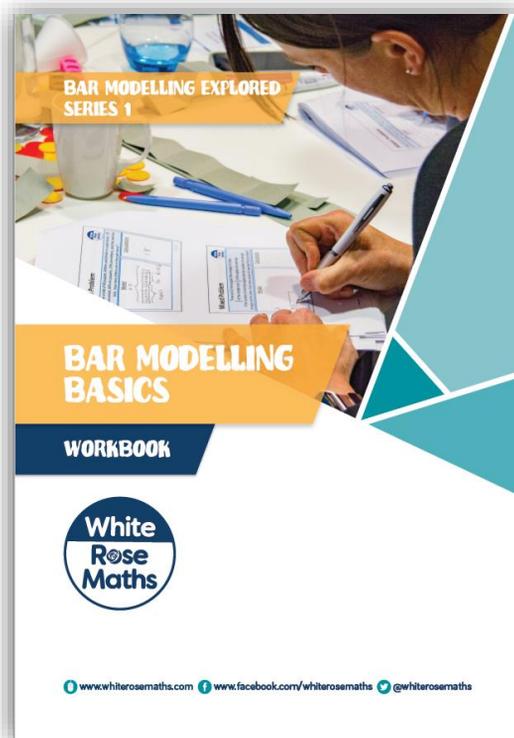
(<https://whiterosemaths.com>)

Initially, the Maths Lead, Emma Hawkes, was coordinating teacher access to afternoon CPD sessions and these had been well received. As lockdown began, it was important to continue the momentum and White Rose, as well as offering webinars, launched 3 online self-paced CPD courses. You can find out more here - <https://whiterosemaths.com/professional-development/online-training-courses/>

Emma worked with Stoke MEP to build a CPD programme for all teachers and teaching assistants across the academy to complete two of the three sessions during the Summer term 2020 as and when they could, closely monitoring the participation and prompting constructive and focused pedagogical discussion. In total 48 members of staff (26 teachers and 22 teaching assistants) completed the courses. In addition, a trainee who was working at the school was also engaged in the CPD and on appointment, an NQT due to start their position in Sept 2020 also engaged.

Each course consists of about short video clips (2-3 minutes) and there is an accompanying workbook for participants to complete.

Clips can be revisited at any time and it is easy to navigate between them and staff reported that this was really useful to know they could refer back to the training when approaching or planning particular areas of work.





Bar Modelling

The first online course selected was Bar Modelling. Within this, there are three series of videos covering;

- Bar Modelling Basics
- The Comparison model and,
- Ratios and Solving Equations.

The feedback was extremely positive and engagement high -

"I just want to say I've completed the training and it has been brilliant. I teach in Early Years and so this is quite new to me."

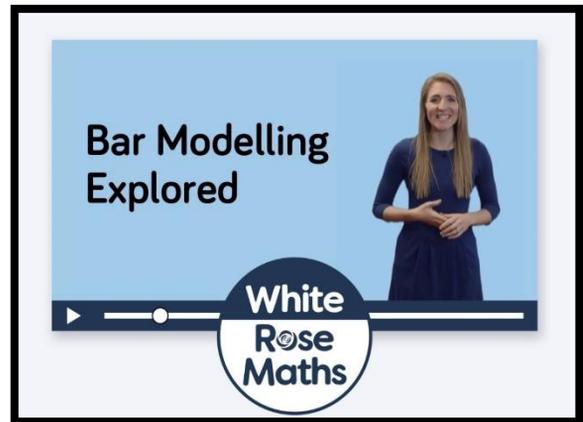
"I much prefer this training than having it in school where I struggle to concentrate, and I can't go back if I don't understand something. I've been able to rewind and pause and it's very detailed and easy to follow."

Participants found this approach to CPD and developing pedagogy very useful and it allowed CPD to continue in challenging circumstances.

"The small video clips were easy to follow and could be paused at any time or rewind. Each clip was very clear, both visually and audibly – presented very well! All clips were of value and the method(s) were explained in enough detail."

"Absolutely fantastic that it could be accessed online and at a time to suit our schedule. The short tasks/questions to complete throughout each section really enhanced and reinforced the learning, as well as acting as a confidence boost/assessment of understanding. The progressive nature of the videos meant that the end point did not feel as daunting as it may have, had the steps of bar modelling not been covered previously."

Others commented on how useful it was to see the progression of the bar modelling approach and how its use developed through the school years.



Reduction

White Rose Maths

Model	Calculations
<p>8</p> <p>5 3</p> <p>Left Over Eaten</p>	$8 - 3 = 5$

Dionne has $\frac{1}{2}$ as many beanbags as Fred. Fred has $\frac{1}{3}$ as many beanbags as Sara. Sara has 84 more beanbags than Fred. How many beanbags are there in total?

White Rose Maths

Model	Calculations
<p>D <input type="text"/></p> <p>F <input type="text"/></p> <p>S <input type="text"/></p>	

12,450,132

White Rose Maths

Millions			Thousands			Ones		
H	T	O	H	T	O	H	T	O
	●	●●	●●●	●●●		●	●●	●



The sessions were very practical and gave participants the opportunity through the workbooks to have a go themselves.

“The ability to watch, pause, have a go, replay and continue at your own pace. Very good, clear, concise explanations given to develop my understanding. I liked that there were lots of opportunities to apply my learning through the tasks.”

“It was really useful to have the opportunity to see the different types of models that can be used for a problem. The reinforcement of what the models are called, and other language related to the use of bar models.”

On completion of the course, a certificate is given to participants.



Staff reported how much more confident they were to use bar modelling with their classes after watching the demonstration videos and also how manageable this way of engaging with training had been,

“I really liked and appreciated how each session was delivered in short bursts, so as not to overload the person taking the course. The fact that you could leave and return as and when was also appreciated too, felt able to digest the information that I’d just been exposed to, and go back for more when I was ready to. Made the experience much more manageable and enjoyable.”

VIDEO 3 – SUBTRACTION 2

Why do you think when finding a difference a single bar model doesn't show this as well?

P

TASK Match the following worded problems with the correct model.

Model

Class A	105.60	
Class B	?	← 34.25

Two classes are raising money for charity.
Class A raise £105.60
Class B raise £71.35
How much more money did Class A raise?

Model

Class A	105.60	
Class B	71.35	← ?

Write the worded problem for the last model.

Model

Class A	?	
Class B	71.35	← 34.25

Two classes are raising money for charity.
Class A raise £105.60
Class B raise £34.25 less than Class A.
How much did Class B raise?

B BEFORE THE VIDEO
P FALSE ICON
A AFTER THE VIDEO

5

“I personally found being able to work through this remotely, beneficial, as it meant you could work through at your own pace. Very useful, well-delivered training, thank you.”

“I feel that I am now much more confident in how I can use bar modelling with my learners.”

“The training was really useful and reassured me that I am correctly using bar models in the classroom. I found the fractions part particularly useful and can see how it will help the children to visually represent fractions. In the classroom I will show the children the difference between the two types of bar models and allow children to trial and error the use of both. It will be amazing to hear the children justify the reason they chose a particular bar model.”

9



Concrete Pictorial Abstract

The second course which all staff completed was on Concrete Pictorial Abstract approaches. The three sessions focused on:

- CPA basics;
- CPA with number and;
- CPA with negative numbers and algebra.

Evaluations demonstrated that the sessions were again well-received and included comments relating to how useful the demonstrations were and how the session had highlighted the importance of the terminology and language used.

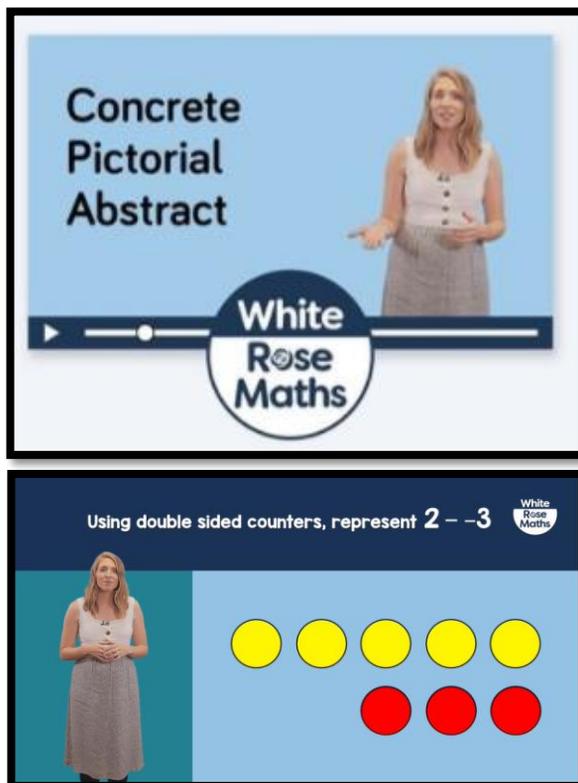
"I like that the training is progressive, each part gradually building on the other. Also, a great recap for use of pictorial models alongside abstract as well as hearing the terminology to go alongside this."

How to support pupils to develop a greater understanding of the mathematics and how each step built up the mathematical understanding and how to unpick the misconceptions were also highlighted.

"I enjoyed being able to complete the tasks along with the instructor. And thought the design of teaching was well thought out. The questioning allowed me to think on behalf of the students – what misconceptions they might have or questioning of the material and how to answer these instances in the best possible way."

"Excellent to see how all methods can be used in the classroom alongside one another. The videos are great at highlighting children's misconceptions."

"Really useful session to show me how to apply concrete and pictorial methods to ensure that children have a deeper understanding of the mathematical topics before moving on to the abstract methods."



The aspect of being able to see progression was noted.

"It was really useful to see the progression from how CPA should be used to acquire a deeper understanding of numbers to 10 in Foundation all the way up to using double-sided counters and algebra tiles solving two step equations in Y6. It was also useful to be reminded of which concrete and pictorial equipment and approaches should be used in different mathematical problems and what the strengths and limitations are of each."

"As a year 3 teacher, it was really good to see the clear progression of CPA from Early years through to upper key stage 2. I will certainly use the double-sided counters I have in class after seeing the value of these in the videos."

"The simplicity of the models used & how clear the methods are to relay back to the children."



Impact

A priority for the school is to continue to develop staff subject knowledge on the mastery model to raise standards at the end of Key Stage 2. Usually, selected staff would access CPD training and then feedback to teaching staff. However, through this remote approach, ALL staff (including learning support assistants) were able to access high quality CPD. Furthermore, staff are able to revisit the training videos before teaching particular concepts, improving the quality of teaching and learning.

Enhancing subject knowledge has positively impacted on staff confidence and a shared vision has been established.

The approaches covered in the CPD online sessions and the impact of them within the classroom have been monitored in a range of ways;

- CPD evaluation forms
- Book looks
- Monitoring of paperless planning
- Pupil conferencing

Book looks and paperless planning monitoring shows that children are exposed to and are using visual representations and structures to enhance understanding. Also evident are stem sentences showing staff value and understand the need for mathematical talk. Photographs of work clearly indicate that children have access to concrete resources and are using pictorial approaches to explain their understanding and pupil conferencing revealed children are able to explain the CPA approach and how this is used in lessons. A consistent approach to the teaching of mathematics across the school and use of terminology used by staff and pupils is now evident. Knowing the progression of concepts allows staff to support all learners.



They have the expertise to strengthen and deepen understanding but also stretch and extend. It is now understood why there is a need for a small step approach to teaching and the importance of children fully understanding a concept before moving on because of how all the steps link together.

A shift in mindset has also occurred, staff now recognise the power of thinking, not just doing. Manipulatives are used to explain mathematical knowledge and bar models as a tool for visualising problems. The 5 big ideas of mastery (<https://www.ncetm.org.uk/teaching-for-mastery/mastery-explained/five-big-ideas-in-teaching-for-mastery/>) are seen in lessons with staff having the confidence to use representations and structures which are appropriate to aid understanding.



Course Evaluations

Participants were asked to evaluate the impact and delivery of each course using the following ratings-

1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree

Bar Modelling					
1	2	3	4	5	6
The session enhanced my knowledge and understanding.					
93%	7%				
The session provided me with practical ideas I can use in my everyday work.					
87%	13%				
The session was delivered in an engaging and professional manner.					
94%	3%	3%			

Concrete Pictorial Abstract					
1	2	3	4	5	6
The session enhanced my knowledge and understanding.					
87%	13%				
The session provided me with practical ideas I can use in my everyday work.					
87%	13%				
The session was delivered in an engaging and professional manner.					
100%					

Next steps

Moving forward, staff are now completing the online CPD course on Thinking through Variation which will further develop their understanding and confidence leading to greater consistency of approach across the school. An added advantage of the online courses is that staff new to the school have been able to access the online self-paced training and so are familiar with the expectations and approach the school has adopted.

Funded CPD through the Stoke MEP Opportunity Area project is enabling staff to access White Rose Wednesday twilight CPD sessions. This is a series of discrete online webinars sessions for Stoke teachers and teaching assistants which enable colleagues to focus on particular areas for development in their teaching and also on areas of weaknesses identified on pupil assessment papers, such as fractions. This is leading to a greater understanding of teaching for understanding and a heightened awareness of where misconceptions may appear and how to avoid them.

The OA project has now extended its programme to include training for Early Years and with the introduction of Power Maths (www.pearson.com/international-schools/british-curriculum/primary-curriculum/power-maths.html) as a resource in reception and ongoing CPD webinars, a consistent, strategically well-led and focused approach to learning maths is being embedded leading to highly skilled and confident staff with a clear understanding of the pedagogical aspect of their work and an improvement in student outcomes.

Emma Hawkes (Park Hall Academy) and Ceri Bedford (Stoke-on-Trent Mathematics Excellence Partnership)



Top Tips For A Top Year

Making The Most Of
The **School Direct**
Experience



Scared, apprehensive, excited, worried, terrified, anxious, eager.. plus many more emotions that are impossible to put into words. The journey though **School Direct** training with **BTSA** is one through which you will discover emotions you didn't even know you had.



Over the next two pages we present a whistle stop tour of a year in training, written by a former trainee who hopes it will help future students considering teaching as a career.

Tip 1 – Get ready for a wave of emotions!

Being a student teacher **WILL** be an emotional rollercoaster – you may laugh, cry, feel anxious and possibly doubt yourself, so when it happens, remind yourself that it has happened to us all and will continue to long after you qualify. There is one emotion I am happy to share with you all – I absolutely **LOVED** being a School Direct Trainee! It was the best decision I ever made!

Tip 2 – Remember you are unique!

Always remember that your journey is completely unique to you! No other BTSA student this year, or in any other year, will have the same experiences, highs, lows or outcomes as you. That isn't to say that you can't learn from others and their experiences (see Tip 4), but this tip is more about not comparing yourself to others. We are all our own worst enemies sometimes and (even if you think you won't) you will find yourself worrying because someone has 'already taught a lesson', 'filled the entire PebblePad in one week' or 'been told that they have a job'. I remember very early on in the course overhearing others talking about their lesson plans and how much they were doing on their placement and to say I panicked was an understatement! It is hard to stop yourself, but I soon learnt to ignore what I was hearing and focus on what experiences **I** was having and how much **I** was learning. As long as you reach your end goal, the journey you take to get there really doesn't matter.



Tip 3 - Get to know your children

Really get to know your children. Talk to them; find out what they enjoy (and what they don't!) and what motivates them. Listen to them. Ask them questions. Observe them. The better you know the children, the easier it is to build up mutually respectful relationships and this will be the basis of a successful placement.

Tip 4 - Learn from previous students

If you are lucky enough to have previous students in your placement schools, talk to them. Ask them for advice and help (if you want it), but always remember Tip 2 – their journey will have been different to yours. They have, however, been through the entire course and whilst they may not remember the detail of it all, they will remember how they survived and flourished. They will also have their own top tips too!



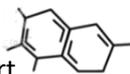
Tip 5 - Take every opportunity that comes your way!

Imagine - a member of SLT approaches you as an Upper Key Stage 2 student and says, "Could you spend the afternoon in nursery today?". What do you say? My top tip would be to say "Yes!" It may not be where you wanted to train and it may be the last place on earth you would ever apply for a job, but in my opinion, there are two reasons to say yes. Firstly, you are on placement in a school team and helping each other out is a key part of good teamwork (it is exactly what you would say to the children in your class, so why should you be any different?). Secondly, all experience is good experience and something from which you can learn; either about yourself, or about children and their development. Always remember, children are not delivered to your class from outer space, they have experiences in your school that have shaped who they are – learn as much as you can about those experiences and it really will help you to develop as a teacher.





Tip 6– Be prepared to be observed! I could simply say don't worry about observations as they are a positive experience to help and support your development. However, with my realistic head on, I should explain that I am one of those people who, the second someone stands by me as I type, I jumble all my letters up, so to say I was dreading being observed would be an understatement! I am yet to meet anyone who says that they look forward to the process, but you will be observed every week throughout the course and then ongoing throughout the whole of your teaching career. How they make you feel really isn't something I can predict or assume, so all I will say is I hope that you are as lucky as I have been in having supportive and encouraging mentors and tutors carry out your observations. You will be observed teaching lessons that you feel have gone well, or not so well, but the most important thing is that you reflect on them and learn from them all.



Tip 7 - Keep on schedule! Once you start having weekly observations, you will have a lesson plan to prepare, a reflection to write afterwards and your mentor's appraisal to collate. Keep on top of this from the start. Get them completed and uploaded each week and it won't seem such a huge task. You will become more efficient at writing as the year goes on and this will also help with time management. Write your reflection as soon as you can after your mentor meeting – it is much easier that way! This also applies to uploading your evidence into the T Standards on PebblePad – upload them as soon as you have them. Again, this is so much easier than trying to find your evidence at a later date. You can always delete it, but you will struggle to find that scrap of paper you jotted something down on in October, when you are finalising your evidence in June! Scannable and PebblePocket are two useful apps to help with this.



Tip 8 – Reflect! Reflect! Reflect! You will hear this word A LOT! but it is so important to your journey not just as a student, but forever as a teacher. Ask yourself, what could I improve next time? What could I do differently?

Don't forget to give yourself a pat on the back for what went well too! There are always positives in every lesson – don't let them get lost, because they are just as important and you can repeat them in the future!

Tip 9 - Join in! Ask questions. Be inquisitive. Join in the variety of sessions offered throughout your training. Have an open mind. Don't let it all pass you by. Be all of those things that you are trying to encourage in the children in your class. Sometimes, your experiences at University or in the Hub may push you outside of your comfort zone, but personally, those are the times I have learnt the most. It's worth a try, isn't it?



Tip 10– Placement 2 Make the most of placement 2. This may not be your chosen Key Stage, but you will be amazed at what you can learn in such a short space of time. Again, join in and get involved, this time is valuable. Learn from your new mentor, just as you did from your first one. The contrast in your second placement will really help your skills develop and also your understanding of your own strengths and capabilities.

Tip 11 - Take advantage of the support available from BTSA I haven't been paid to write this but I genuinely mean it when I say that you could not put a price on the support from the BTSA team. There has never been a time when I did not feel that I could ask a question, share a thought, ask advice, or have an honest discussion about my experiences, so my top tip here would be to access this support as you need it.



Tip 12 – Enjoy every minute! Being a teacher is a massive privilege. Every day, parents entrust their children to you and you can make such a huge difference to their lives. You may not see it immediately, but they will remember those times you listened to them tell you about something they did at the weekend, the stories you read to them, that lesson when they learnt something that made them say “WOW” and how you made them feel. That moment starts from day one – enjoy each and every one!

From Novice To Expert

Supporting Early Career Teachers





In January 2019 the Department for Education released the **Early Career Framework** which was developed in consultation with an Expert Advisory Group and a wide range of teachers, school leaders, academics and experts.

The content of the framework and its underpinning evidence has also been endorsed by the Education Endowment Foundation (EEF).

The purpose of the framework was to ‘transform the support and development offer for teachers at the start of their career’ and ‘build on high-quality Initial Teacher Training (ITT) and become the cornerstone of a successful career in teaching’.

Providing high quality support throughout the induction period ensures that those in their first years of teaching are able to develop the knowledge, practices and working habits that will allow them to thrive in what is commonly seen as the steepest learning curve of a lifelong career in education.

The ECF was designed to make sure Early Career Teachers focus on learning the things that make the most difference in the classroom and their professional practice.

As seen in other professions, areas covered in initial training will be covered in greater depth as teachers continue on their journey to becoming experts. The ECF supports Early Career Teacher development in 5 core areas-

- **Behaviour management**
- **Pedagogy**
- **Curriculum**
- **Assessment**
- **Professional Behaviours**



In order to ensure congruence with the 8 Teachers’ Standards, the content of the framework is presented in 8 sections. Each section sets out two types of content. Within each area, key evidence statements (“Learn that...”) have been drawn from current high-quality reviews and syntheses, including meta-analyses and rigorous individual studies. In addition, the ECF provides practical guidance on the skills that Early Career Teachers should be supported to develop. Practice statements (“Learn how to...”) draw on the best available educational research and on additional guidance from the Expert Advisory Group and other sector representatives. References for evidence underpinning each section are provided at the end of the ECF. In each reference section, a small number of further reading items have been recommended. These recommendations have been made on the basis of application (the extent to which the source includes clear discussion of classroom practice) and accessibility (including whether the source is in the public domain).

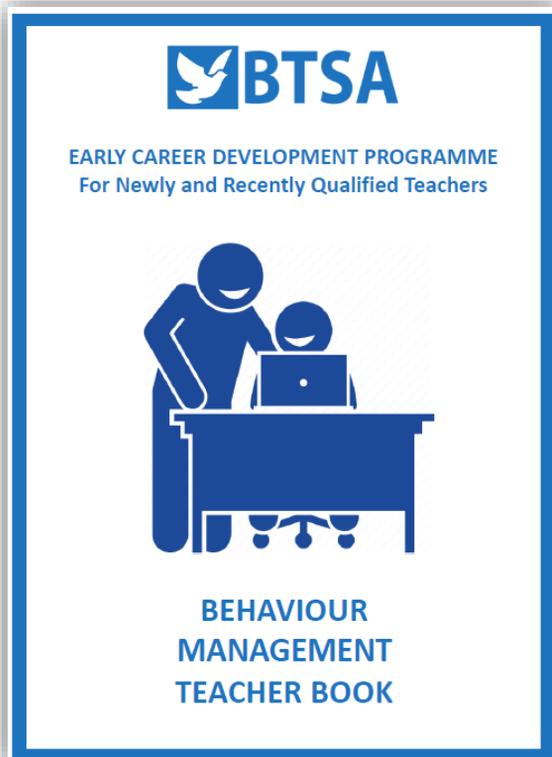


BTSA have used the ECF to develop the **Early Career Development Programme** which provides Newly and Recently Qualified Teachers with six half-termly sessions over the academic year. The content of these sessions covers the Five Core Areas in detail including an opportunity to explore the underpinning evidence and consider how this might be best utilised in the classroom.

Participants are also provided with Teacher Books containing –

- **An overview of the core area**
- **Key Ideas from research**
- **Strategies for the classroom**
- **Questions to consider**

Early Career Teachers are also encouraged to reflect on their developing practice and discuss with their mentor next steps to achieve agreed targets using the optional BTSA Teacher Self-Evaluation Log. This log enables ECTs to track the progress they are making by identifying trends in areas where they are doing well and areas where they may need further support.



Above: An example of one of the Early Career Development Programme Teacher Books. **Below:** The DfE Teacher Career Pathways supporting all teachers on their journey from ITT to Leadership.

Figure 3. Teacher career pathways



Five Things I Wish I Knew When I Started Teaching

By Carl Hendrick





English Teacher and author of ‘How Learning Happens’, Carl Hendrick, identifies the five things he wishes he had known as a Newly Qualified Teacher.

1. Motivation doesn’t always lead to achievement, but achievement often leads to motivation.

While there is a strong correlation between self perception and achievement and we tend to think of it in that order, the actual effect of achievement on self perception is stronger than the other way round (Guay, Marsh and Boivin, 2003.) It may well be the case that using time and resources to improve student academic achievement directly may well be a better agent of psychological change than psychological interventions themselves.

Daniel Muijs and David Reynolds (2011) note that: *“At the end of the day, the research reviewed shows that the effect of achievement on self-concept is stronger than the effect of self-concept on achievement.”*

Despite this, a lot of interventions in education seem to have the causal arrow pointed the wrong way round. Motivational posters and talks are often a waste of time and may well give students a deluded notion of what success actually means. In my experience, teaching students how to write an effective introduction to an essay through close instruction, careful scaffolding and then praising their effort in getting there is a far more effective way of improving confidence than showing them a TED talk about how unique they are.

2. Just because they’re engaged doesn’t mean they’re learning anything.

One of the talks that has stuck with me the most in recent years was from Professor Rob Coe in which he criticised graded lesson observations and highlighted several performance indicators for learning which are actually very misleading:

Poor Proxies for Learning

- Students are busy: lots of work is done (especially written work)
- Students are engaged, interested, motivated
- Students are getting attention: feedback, explanations
- Classroom is ordered, calm, under control
- Curriculum has been ‘covered’ (ie presented to students in some form)
- (At least some) students have supplied correct answers, even if they
 - Have not really understood them
 - Could not reproduce them independently
 - Will have forgotten it by next week (tomorrow?)
 - Already knew how to do this anyway



7



This again is quite a counterintuitive claim. Why is engagement such a poor proxy indicator – surely the busier they are, the more they are learning? This paradox is explored by Graham Nuthall in his book *‘The Hidden Lives of Learners’* (2007) in which he writes: *“Our research shows that students can be busiest and most involved with material they already know. In most of the classrooms we have studied, each student already knows about 40-50% of what the teacher is teaching.”*

Nuthall’s work shows that students are far more likely to get stuck into tasks they’re comfortable with and already know how to do as opposed to the more uncomfortable enterprise of grappling with uncertainty and indeterminate tasks.



3. Marking and feedback are not the same thing.

This subtle difference may seem semantic but there is an important distinction to be made. The value in marking a piece of work may counterintuitively be of more benefit to the teacher than the student as David Didau explains:

“While there’s no doubt that marking and feedback are connected, they are not the same. In some parts of the world – Japan for instance – teachers do very little marking but that’s not to say students are not getting feedback. From my own experience, I’m pretty sure it’s possible to make marks in students’ books without providing anything in the way of useful feedback and of course lots of thinking (some of it disastrous) has been done to try to prevent this from happening. Ask any group of teachers if their marking load has increased dramatically in past five years and they’ll fall over themselves to let you know just how much impact marking has on their lives, but what impact does it have on students’ outcomes? The answer is, we just don’t know.”

4. Feedback should be more work for the recipient than the donor.

Possibly the most damaging misappropriation of research in my career has been the mangling of Assessment For Learning – a quagmire from which we are now only beginning to emerge. Not long after Dylan William’s seminal 1998 **Inside the Black Box** became adopted at a national level, school leaders and policy makers managed to twist it into a pale imitation of its original form as AFL became about students memorising what level they were working at and teachers marking books at a level that defied sense in order to show ‘evidence’ of learning. But for feedback to be truly meaningful to students, they need to take ownership of it which may well mean not giving levels to a piece of work at all and instead just leaving comments for the student to reflect and act upon.

As Dylan William writes: *“Robyn Renee Jackson suggests that one of the most important principles for teachers is “Never work harder than your students” (Jackson, 2009). I regularly ask teachers whether they believe their students spend as long processing feedback as it takes for the teacher to provide it. Few teachers say yes. We spend far too much time giving feedback that’s either completely ignored or given scant attention.”*

5. (a) The steps needed to achieve a skill may look very different to the final skill itself.

If you want to get good at a certain skill then surely the best way to get good at it is to practice that particular skill right? Well not according to the tenets of deliberate practice which asserts a more indirect approach that breaks a global skill down into its constituent local parts and focuses on specific feedback and incremental improvement rather than a set of assessment criteria/performance descriptors that are “aimed at some vague overall improvement.” (Ericsson)

In her book **Making Good Progress**, Daisy Christodoulou writes: *“Whilst skills such as literacy, numeracy, problem solving and critical thinking are still the end point of education, this does not mean that pupils always need to be practising such skills in their final format. Instead, the role of the teacher and indeed, the various parts of the education system, should be to break down such skills into their component parts, and to teach those instead. This means that lessons may look very different from the final skill they are hoping to instil. For example, a lesson which aims to teach pupils reading may involve pupils learning letter-sound correspondences. A lesson with the ultimate aim of teaching pupils to solve maths problems may involve them memorising their times tables. The idea here is that the best way to develop skills does not always look like the skill itself.”*



5. (b). There is no such thing as developing a 'general' skill.

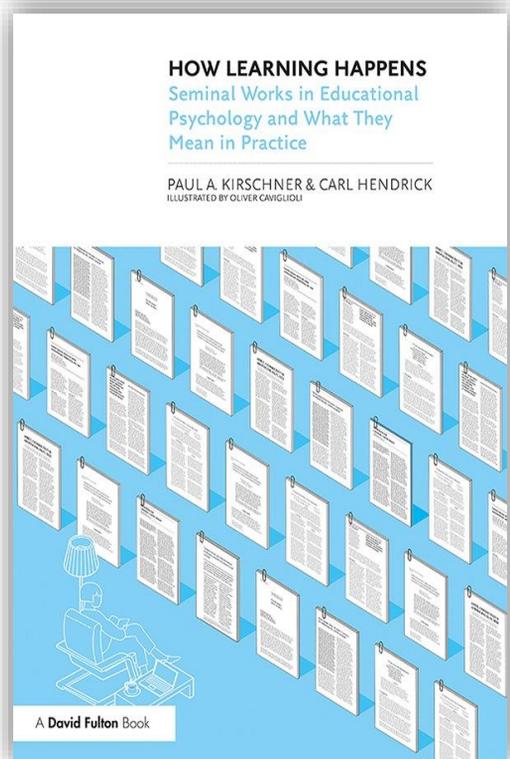
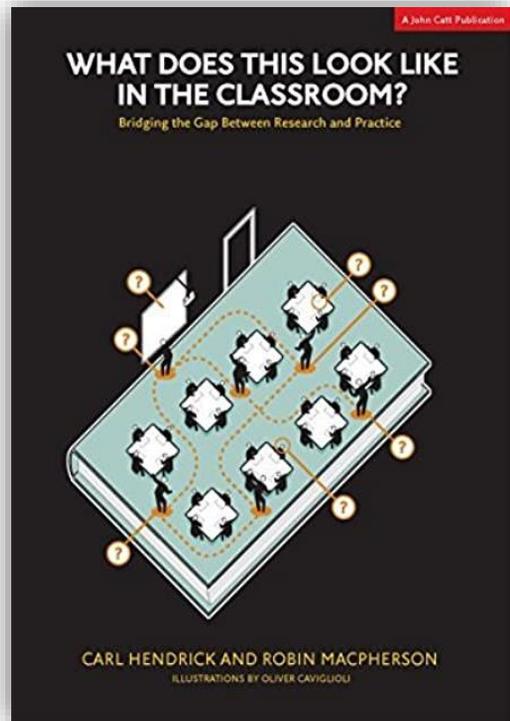
Of course, critical thinking is an essential part of any student's mental equipment. However, it cannot be detached from context. Teaching students generic 'thinking skills' separate from the rest of the curriculum is often meaningless and ineffective.

As Daniel Willingham puts it: *"If you remind a student to 'look at an issue from multiple perspectives' often enough, he will learn that he ought to do so, but if he doesn't know much about an issue, he can't think about it from multiple perspectives ... critical thinking (as well as scientific thinking and other domain-based thinking) is not a skill. There is not a set of critical thinking skills that can be acquired and deployed regardless of context."*

This detachment of cognitive ideals from contextual knowledge is not confined to the learning of critical thinking. Some schools laud themselves for placing '21st-century learning skills' at the heart of their mission but without anchoring them in domain specific contexts, they are often a waste of time.

Anders Ericsson develops this point: *"This explains a crucial fact about expert performance in general: there is no such thing as developing a general skill. You don't train your memory; you train your memory for strings of digits or for collections of words or people's faces. You don't train to become an athlete; you train to become a gymnast or sprinter or a marathoner or a swimmer or a basketball player. You don't train to become a doctor; you train to become a diagnostician or a pathologist or a neurosurgeon."*

Carl Hendrick is author of 'What Does This Look Like in the Classroom?' and the head of learning and research at Wellington College where he teaches English.



The Science of Learning

Applying Principles To Practice



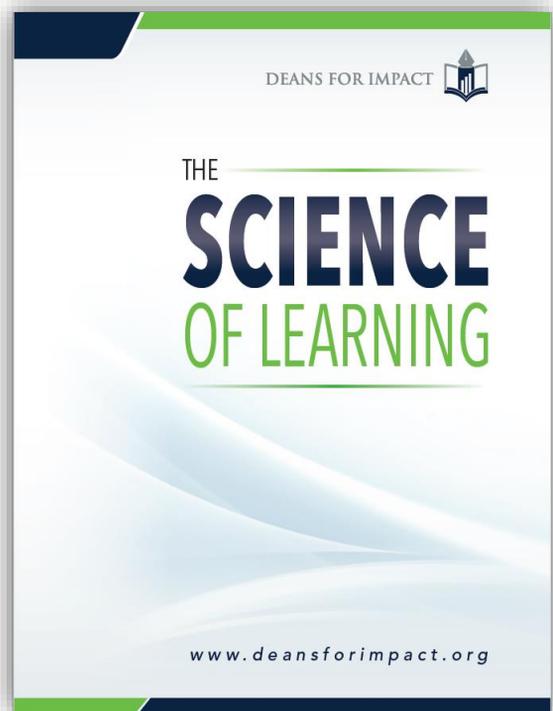


Deans For Impact, in close collaboration with Daniel Willingham, have produced two useful publications that explore the scientific understanding of how learning takes place.

The Science of Learning identifies six key questions about learning that should be relevant to nearly every educator. Deans for Impact believes that, as part of their preparation, every teacher should grapple with — and be able to answer — the questions in *The Science of Learning*. Their answers should be informed and guided by the existing scientific consensus around basic cognitive principles. And all educators, including new teachers, should be able to connect these principles to their practical implications for the classroom.

The Science of Early Learning summarises existing research related to how young children (from birth to age eight) develop skills across three domains: agency, literacy, and numeracy. This document is intended to serve as a resource to anyone who is interested in the best scientific understanding of how young children develop control of their own behaviour and intentions, how they learn to read and write proficiently, and how they develop the ability to think mathematically.

Both publications will be periodically revised as more scientific understanding evolves and they are FREE to download from <https://deansforimpact.org/resources/the-science-of-learning/>





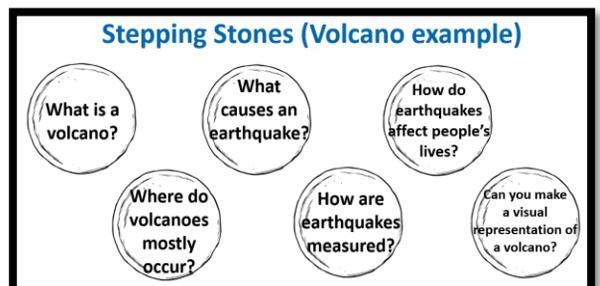
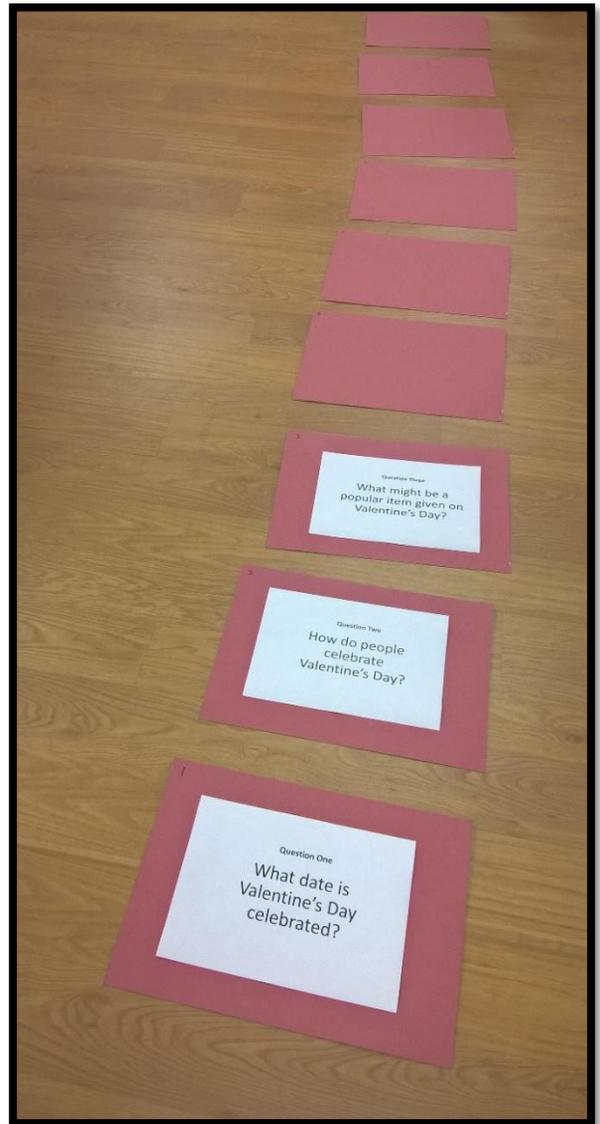
Practical implications

Using the answers to the six questions that Deans For Impact asked, we offer some practical suggestions for putting the cognitive findings into practice.

1. How do students understand new ideas? Students learn new ideas by reference to ideas they already know. Teachers need to ensure they spend time unlocking prior knowledge and being clear about what the children already know before they move on to what needs to be taught.

Classroom Strategy

The Stepping Stones activity uses a questioning framework to identify current understanding and highlights gaps. Choose an area of the curriculum where you are planning a learning sequence. Take six key questions that you intend to ask over the course of the unit and write them on pieces of paper/card. At the start of the topic spread these upside down on the floor and ask one child to read out the questions in order. Ask for a show of hands from those who know the answer. Move on to the next question until the class become 'stuck'. Can anyone in the room answer the question? If so they can be experts who share their knowledge. When you reach the question where everyone is stuck explain that this is the new edge of learning that we will be starting from. The questions can also be revisited at the end of the unit as a way of assessing pupils.





2. How do students learn and retain new information? Information is often withdrawn from memory just as it went in. We usually want students to remember what information means and why it is important, so they should think about meaning when they encounter to-be-remembered material.

Classroom Strategy

Teachers can assign pupils tasks that require explanation (e.g. answering questions about how or why something happened) or that require them to meaningfully organise material. These tasks focus pupils' attention on the meaning of curriculum content.

Using interrogation questions is an effective way to promote elaboration. Consider using some of the following with your class-

How does X work?

Why does X work?

When did X happen?

What caused X?

What is the result of X?

How are X and Y alike?

In what way are X and Y related?

What do you still not understand about X?

How does X tie in with what we already know?

Find out more at

<https://www.learningscientists.org/downloadable-materials>

Elaboration

HOW TO DO IT

Ask yourself questions while you are studying about how things work and why, and then find the answers in your class materials and discuss them with your classmates.

Elaboration

HOW TO DO IT

As you elaborate, make connections between different ideas to explain how they work together. Take two ideas and think of ways they are similar and different.

Elaboration

HOW TO DO IT

Describe how the ideas you are studying apply to your own experiences or memories. As you go through your day, make connections to the ideas you are learning in class.



3. How do students solve problems?

Each subject area has some set of facts that, if committed to long-term memory, aids problem-solving by freeing working memory resources and illuminating contexts in which existing knowledge and skills can be applied.

Classroom Strategy

Reflect on your curriculum offer. Does it build on prior knowledge? Are cross-curricular links exploited? Are there opportunities for real life transfer? Do you signpost the learning journey to pupils?

Ensure mid and long term planning includes opportunities for spaced practice so that content is revisited and pupils revise their understanding over time.

Five minute recaps throughout the week are useful refreshers for children. Many teachers deliver times tables in Maths in this way but what other curriculum content lends itself to this type of learning? The advantages of learning to read by phonics are well documented.

Stories and mnemonics also help pupils to impose meaning on hard-to-remember content.

Find out more at

<https://www.learningscientists.org/downloadable-materials>

Spaced Practice

HOW TO DO IT

Start planning early for exams, and set aside a little bit of time every day. Five hours spread out over two weeks is better than the same five hours all at once.

M T W Th F Sa Su M T W Th F Sa Su

Spaced Practice

HOW TO DO IT

Review information from each class, but not immediately after class.

LESSON BREAK REVIEW

Spaced Practice

HOW TO DO IT

After you review information from the most recent class, make sure to go back and study important older information to keep it fresh.

1 MONTH AGO 1 WEEK AGO 1 DAY AGO



4. How does learning transfer to new situations in and outside of the classroom?

We understand new ideas via examples, but it is often hard to see the unifying concepts in different examples.

Classroom strategy

Teachers can alternate concrete examples (e.g. word problems) and abstract representations (e.g. mathematical formulas) to help pupils recognise the underlying structure of problems.

Young children begin to understand abstract concepts through concrete representations, and to apply what they know in new contexts by gradually transitioning from concrete to visual to abstract. Manipulatives (physical objects) can be useful tools for understanding mathematical problems when used in a structured, guided context.

For a given concept, young children need to understand that symbols and abstract representations represent quantity, and these symbols should gradually replace manipulatives and concrete representations in how they think about quantity.

Find out more at

<https://www.learningscientists.org/downloadable-materials>

Concrete Examples

HOW TO DO IT

Make the link between the idea you are studying and each example, so that you understand how the example applies to the idea.



Concrete Examples

HOW TO DO IT

Share examples with friends, and explain them to each other for added benefits.



Concrete Examples

HOLD ON!

Ultimately, creating your own relevant examples will be the most helpful for learning.





5. What motivates students to learn?

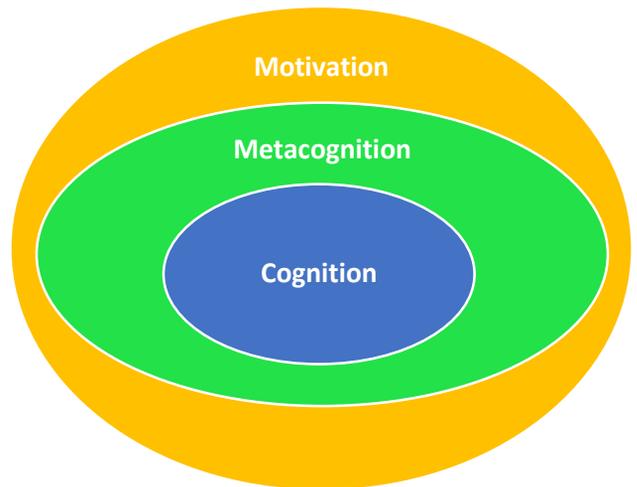
Self-determined motivation (a consequence of values or pure interest) leads to better long-term outcomes than controlled motivation (a consequence of reward/punishment or perceptions of self-worth).

Classroom strategy

Teachers can contribute to pupils' beliefs about their ability to improve their intelligence by praising productive student effort and strategies (and other processes under pupil control) rather than their ability. Teachers can prompt pupils to feel more in control of their learning by encouraging them to set learning goals (for improvement) rather than performance goals (for competence or approval).

Teachers control a number of factors related to reward or praise that influence pupil motivation, such as:

- whether a task is one the pupil is already motivated to perform;
- whether a reward offered for a task is verbal or tangible;
- whether a reward offered for a task is expected or unexpected;
- whether praise is offered for effort, completion, or quality of performance; and
- whether praise or a reward occurs immediately or after a delay.



Metacognition and Self-regulation

There are three essential components linked to promoting self-regulation –

- **Cognition** – the mental process involved in knowing, understanding, and learning.
- **Metacognition** – often described as ‘learning to learn’.
- **Motivation** – willingness to engage our metacognitive and cognitive skills.

Modelling self-regulation and encouraging pupils to transfer their skills in this area results in high levels of independence. Teachers should share John Hattie’s three feedback questions and train pupils to regularly try and answer these themselves. They are-

Where am I going?

How am I doing?

Where to next?



6. What are common misconceptions about how pupils think and learn? Debunking six educational myths around how we learn.

Students have different learning styles.

Learning styles were once all the rage. Teachers were encouraged to pigeon hole their students as 'visual, auditory or kinaesthetic' learners and organised classroom activities to match 'preferred' learning styles.

"There is very limited evidence for any consistent set of learning 'styles' that can be used reliably to identify genuine differences in the learning needs of young people, and evidence suggests that it is unhelpful to assign learners to groups or categories on the basis of a supposed learning style". **Education Endowment Foundation**

Humans only use 10% of their brains.

A widely perpetuated urban legend which has been misattributed to many people, including Albert Einstein.

"Brain activity scans show that even the most menial tasks activate many parts of it and it appears that there is no hidden storehouse of untapped brain power. We use all of our brain." **Doctor Eric Chudler**

Some people prefer to use the 'left' or 'right' hand side of their brains.

The idea that we are dominantly left- or right-brained has never had a concrete basis in neuroscience. Labelling people as left- or right-brained is no better than approaching people according to their astrological sign or blood type.

"The brain is a single, spectacularly complicated, and profoundly integrated system and far from having separate lives, the two halves work together. They are not isolated systems that compete or engage in some kind of cerebral tug-of-war." **Kosslyn and Miller**

All practice is equivalent.

Researchers who have investigated expert and novice performance have uncovered important distinctions between deliberate practice and other activities, such as play or repetition. Deliberate practice is not the same as rote repetition. Rote repetition — simply repeating a task — will not by itself improve performance.

Teachers should space practice over time, with content being reviewed across weeks or months, to help students remember that content over the long-term. Each time we return to material it is learnt quicker and retained for longer.

People can accurately judge their own learning and understanding.

The "illusion of knowing" is simply the fact that there are things we do not know we don't know.

"Even when students fail to recall a solicited target, they can provide feeling-of-knowing (FOK) judgements about its availability in memory."

Koriat

Novices and experts think all in the same ways.

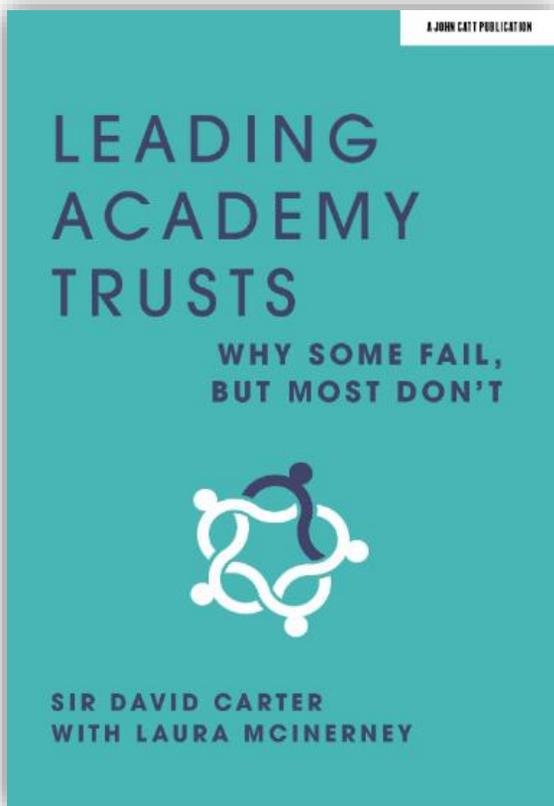
"Novices can engage in problem solving for extended periods and learn almost nothing."

Clark, Kirschner & Sweller

"Novices need to use thinking skills. Experts use knowledge."

Sweller, Ayres & Kalyuga (2011)

Welcome to our regular feature focusing on education publishing. This issue we review the latest book from Sir David Carter.



Sir David Carter started his career as a music teacher in several comprehensive schools before spending thirty years in school leadership before becoming one of the first Regional Schools Commissioners and then National School Commissioner. He knows what it feels like to be responsible for multiple schools and how the best leaders make large-scale collaboration work for their teachers, pupils, parents and the whole community.

This personal and accessible book shares the recipe for understanding the purpose of academy trust leadership and give insider knowledge of how to do it well and with all stakeholders at the forefront of your mission.

“Leading Academy Trusts Why Some Fail, But Most Don’t.”

An intriguing title to Sir David Carter’s, ex-National Schools Commissioner, new book. SDC takes us through his personal educational journey using real life situations and scenarios to paint a picture of what he has found to work, and vice versa, through this very readable, considered and practical book.

It isn’t a tick list and how to guide but there are many examples of best practice which I think that we at St Bart’s have adopted, adapted and developed. The one that struck home most to me was the discussion around treating all staff in St Bart’s as the “faculty”. Although you may be employed as a Maths lead in one of the academies you are part of the St Bart’s Maths faculty.

I don’t necessarily believe in fate or things happening for a reason, perhaps it is just an example of synchronicity, but as I was reading the passage about the educational faculty Steve Jones sent out the SBMAT Talent Map. As a result of this many staff across St Bart’s took it upon themselves to contact their faculty colleagues to touch base and say hello.

You can easily see how this could develop, drawing on the good practice that is already in place through the Core Four networks, the great work that John and Eva are doing on CPD, the ground work that Jill and our network coordinators did and the opportunities that working remotely via Zoom/Teams have afforded us.

If you haven’t had chance to have a look at the book it is available on Amazon and if you haven’t touched base with your faculty colleagues yet – I encourage you to do so. It goes to the heart of our footpath to PEACE.



Welcome to The Hub

BTSA Training & Development Centre

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