Presentations and papers:

1. Differentiation: How do LSAs impact learning and differentiation in and out of the classroom?
   Abatan, L. Aryeetey, J. Bachurska, A. Caryk-Goode, D. Clyde, S. Gruită, R. Luperon, O. Rodrigues, S. Scala, M.

2. Questioning: What is the importance of questioning?
   Akther, S. Falola, D. Lea, P. O’Donnell, A. Sandell, D. Smith, T. Tikum, G. Boulcher, T.

3. Memory: How can apps assist the memory of our students across various subjects?
   Kazim, Y. Lynch, E. Mehmet, M. Molloy, J. Nelson, B. Potton, J. Utomi, C.

4. Growth mindset: What successful motivational techniques can be used across the curriculum?
   Bonfield, K. Burnett, K. Fali, W. Hadley-Stone, A. Hardwick, J. John, K.

5. Metacognition: How can teachers teach metacognitive strategies to improve students’ progress?
   Bauhofer, T. Fabian, G. Fionda, C. Perkins, D. Vaughan, D.

6. AFL: How can we differentiate summative assessments in English…?
   Zensen, Y. Nelson, J.
Foreword

Teacher research, and action research are a vital tool in a teacher’s armoury, helping to wade through the constantly changing battlefield of modern education, whilst providing the consistency and stability that young people so badly need. The need to negotiate the tension between these two states is one of the key reasons schools have teaching and learning development programs.

It is always one of the most exciting parts of school life when teachers get a chance to sit down and bounce ideas off one another about how to improve what we do, and we have always been struck by the dedication with which staff at Prendergast Ladywell School apply themselves to the task. This year’s action research has surpassed even the high bar set last year, and the research presented here represents both cutting edge educational knowledge, and actions which have had real, measurable improvements to learning in our community. Here are some tangible and usable insights into the powers of questioning, apps, mindset, differentiation, AFL, and metacognition.

As a body of staff we are growing our educational knowledge from the roots up. We believe that this is the only way we are going to be able to remain empowered as professionals in an increasingly monitored and politicised world.

We hope you enjoy the studies which follow.

Editors
Action Research area 1: Differentiation

How do LSAs impact learning and differentiation in and out of the classroom?

Abatan, L. Aryeetey, J. Bachurska, A. Caryk-Goode, D. Clyde, S. Gruitä, R. Luperon, O. Rodrigues, S. Scala, M.

REVIEW OF ARTICLES:

'12 Revision tips for pupils with SEND'

Article summary – Teachers need to scaffold, guide and support students with special educational needs and disabilities a little more in revision that with other students. Teachers tend to forget to differentiate revision. Here are some strategies to consider: 1. break revision down into small steps, 2. Visual prompts can be really useful e.g. mind maps, images, spider diagrams to revise from, 3. Getting students to work in pairs can be very effective, 4. Making things into songs can be incredibly powerful, 5. Visualising conversations may help students with SEND memorise information by setting it in real-life context, 6. Mnemonics are really useful (e.g. 'Big Elephants Are Ugly – to spell BEAUTiful correctly), 7. Decoding exam questions – train students to differentiate between the command words of a question and the subject-specific words, 8. Making connections between exam questions and the subject knowledge they possess, 9. Practise using key vocabulary in sentences.

'Teaching Assistant Deployment; Review Guide'

Teaching assistant deployment-Review guide/London leadership strategy/

Research has shown that impact of LSAs is linked to the quality of LSAs deployment and preparation. If deployed well, TAs can make a big difference to student outcomes.

The best predictors of how effective TAs are in classrooms are not the decisions they make themselves. It is better if school leaders or teachers impact on their decisions and actions.

The best advice is to use TAs to supplement high quality teaching, not to replace it.

School leaders are encouraged to avoid using TAs as an informal teaching resource for lower-attaining students. Training is advised to ensure teachers are planning lessons to maximise use of TAs. SLT is encouraged to keep up-to-date with changes in the national policy and practice of TAs.

This approach benefits all the pupils, as well as teachers.
**TA review process**

Once the review of SEN provision is carried out it includes 6 stages:

1. Identification
2. Self-evaluation
3. Preparation
4. School visit
5. Reporting
6. Follow-up

The findings focus on 7 areas:

- Strategic use of LSAs
- Classroom deployment
- Effective interactions
- Preparation and training
- Structured interventions
- Monitoring, tracking and evaluation
- Outcomes/improving outcomes

**SUGGESTED THEMES AND AREAS TO INVESTIGATE IN A SCHOOL EVALUATION:**

**Strategic use of LSAs**

- Deploying TAs to work with pupils across the attainment range, not just SEND
- TAs contributing to lesson planning and feedback cycle

**Classroom deployment**

- Teachers plan and organise TAs to serve objectives and expected outcomes for students
- TA deployment is in-line with TA specialisms and aptitudes
- Information sharing between the teacher and TA during lessons

**Effective interactions**

- giving students sufficient ‘wait time’ before intervening with help
- TAs consistently giving the least amount of help first. Questioning is pitched at the right level of challenge for student
- TAs ensure pupils retain ownership
- TAs encourage students to reflect on their own performance and give specific feedback

**Preparation and training**

- TAs have a clear understanding of concepts to be taught in the class ahead of time
Structured interventions

- Trained TAs to deliver carefully-selected, evidence-based structured interventions to complement and extend classroom teaching
- TAs and teachers both help students make connections between what is learnt in the intervention and in the wider curriculum

Monitoring, tracking and evaluation

- TAs make effective contributions to school reporting process and to pupil reviews

Outcomes or improving outcomes

- TA interactions should nurture pupil independence, not create dependence on adults. Students should be able to effectively self-scaffold without the presence of an adult

**KEY LEARNING:**

- The results show that, while some teachers support individuals and small groups in a lesson (generally low-attainers and SEND), they see their main role as leading the class, and TAs are seen mainly as supporting students 1:1.
- TAs are seen overall as fairly confident in their role in the classroom.
- TAs are seen to have the most impact on the learning, confidence and motivation of students, and on keeping them to stay on-task. However they have a small impact on student independence.
- A number of useful suggestions are made regarding improving the impact of TAs in the classroom.

**NEXT STEPS:**

Increase TAs confidence in their role in the classroom through implementation of Teacher/TA agreement outlining expectations of teacher and TA to further promote impact on the learning, confidence and motivation of students.
Action Research area 2: Questioning

How do we as teachers more firmly embed open questions in our practice and how can we encourage students to ask more open questions?

Akther, S. Falola, D. Lea, P. O'Donnell, A. Sandell, D. Smith, T. Tikum, G. Boulcher, T.

REVIEW OF ARTICLES:

‘Question your questioning’

Peter Worley argues in this article that grammatically open questions are not always necessarily better than grammatically closed question. What is far more important is whether the question is cognitively closed or cognitively open.

Grammatically open refers to the structure of the question while cognitively open refers to the content. He provides the example of the question ‘Is the mind the brain?’ while this question is grammatically closed and requires a yes or a no, Peter argues that the question is cognitively open and requires higher order thinking when justifying a decision. To put it simply, what matters more is the potential the question has to be a basis for a discussion and its possibility to encourage higher order thinking.

This leads him to conclude that the follow up questions to the grammatically closed questions are an important part of questioning in a lesson. In his own words "the art of interrogation is so crucial in the classroom... This is how the teacher gains an understanding of the student’s understanding, including, crucially, what they don’t understand – which is essential for progress in learning."

‘The importance of questioning.’

https://classteaching.wordpress.com/2017/01/19/the-importance-of-questioning/

Introduction to a short video cast by Dr Tim Brinded.

The article summarises some of the research on the benefits of questioning before looking at some techniques to improve the use of questioning in classrooms. The video cast is only 2 minutes long and is done by a real teacher teaching in a real school.

Questions are divided into two basic types -open and closed, and the relative proportions of each in classrooms is summarised before summarising the benefits of both. Interestingly, it emphasises the point that,

‘Simply asking higher cognitive questions does not necessarily lead students to produce higher cognitive responses’. This view is supported by Lemov (2015) who states that ‘without sufficient factual knowledge this (divergent questioning) will lead to unfounded speculation’
The article then looks at responding to students after they have answered the initial question using:

- Probing – eliciting further information by asking more questions
- Counterfactual answers – asking students for alternative answers or different points of view
- Playing devil’s advocate – to challenge the students’ conviction with their answer

Two techniques for improving questioning techniques are looked at, cold calling and wait time with the benefits of each outlined.

**Wait time benefits for higher cognitive questions.**

- Increase the number of higher cognitive responses
- Increase the length of responses
- Increased student achievement
- Generate greater participation and increase student-student interactions.

**Cold calling**

- It sets clear expectations in your classroom – everyone participates.
- It removes the chance of relying too heavily on one or two confident students.

The video cast is found at the end of the blog where Dr Brinded echoing Albert Einstein’s famous quote “The important thing is not to stop questioning. Curiosity has its own reason for existing.”

‘The importance of questioning in lesson’

The Importance of Questioning

This article makes it very clear that questioning is the key means by which teachers find out what pupils already know, identify gaps in knowledge and understanding and scaffold the development of their understanding to enable them to close the gap between what they currently know and the learning goals.

Questions are the most common form of interaction between pupils and teachers, yet research suggests that the majority are recall and comprehension - lower order questions which do not require pupils to actively process information. It is only in active processing that the pupil achieves deep level learning. In order to raise pupils’ levels of achievement they therefore need regular practice in higher order thinking - analysing, synthesising and evaluating (https://garyhall.org.uk/importance-of-questioning.html) accessed on the 15th June 2018.
Questions serve a number of essential purposes. For example they:

- Give immediate feedback on pupils’ understanding, which can then be used by the teacher to modify the teaching.
- Help pupils to develop their thinking from the lower order concrete and factual recall type to the higher order analytical and evaluative which promote deeper understanding. Higher order questions help pupils explore ideas and make connections, helping pupils see the "big picture" of the learning. This in turn leads to greater motivation and improved engagement.

Planning key questions and embedding them early in lesson can be very effective. Recording these in medium term plans/ schemes of work can encourage teachers to share the essence of what they want pupils to know and understand, to communicate this to pupils and to find ways of checking these have been achieved in lessons through plenary activities.

**Questioning and independent learning**

Questions need to encourage pupils to think for themselves and consider other options.

For example, try:

- How do you think that…?
- How are you going to…?
- Are there particular things you’ll need to…?

If they have difficulty:

- Could you try to…?
- What about…?
- Have you compared your ideas with…?

**Conclusion**

Encouraging pupils to ask questions for themselves is an essential part of their becoming independent.

**KEY LEARNING:**

- *Simply asking higher cognitive questions does not necessarily lead students to produce higher cognitive responses*
- Grammatically open questions are not always necessarily better than grammatically closed question. What is far more important is whether the question is cognitively closed or cognitively open.
- Questions need to encourage pupils to think for themselves and consider other options.
- Planning key questions and embedding them early in lesson can be very effective
- Help pupils to develop their thinking from the lower order concrete and factual recall type to the higher order analytical and evaluative which promote deeper understanding
- When choosing what question to ask, what is very important is the potential the question has to be a basis for a discussion and its possibility to encourage higher order thinking.
**NEXT STEPS:**

Plan a lesson that develops students’ ability to ask open questions of each other. Incorporate well planned multiple-choice questions into lessons that has common misconceptions as possible answers to select. This will be done with aim of opening up the possibility of a classroom discussion that requires students to justify their chosen answer.

To plan well designed closed questions that are cognitively open, hence can be followed up with questions to elicit students understanding.
How can apps assist the memory of our students across various subjects?

Kazim, Y.  Lynch, E.  Mehmet, M.  Molloy, J.  Nelson, B.  Potton, J.  Utomi, C.

REVIEW OF ARTICLES:

1 13-apps-every-actor-should-use’  https://www.backstage.com/advice-for-actors/backstage-experts/13-apps-every-actor-should-use/

Many different apps that help students memorise lines. Some are available for free. There are some cross curricular opportunities available here. Below are two that seem to be quite applicable to our students.

My Lines lets you have your script with you on a mobile device anytime, anywhere. You can rehearse and memorize your lines without a scene partner, by either looking at or listening to your lines. You can also see or hear cue lines when you’re ready to be off book.

Shakespeare Pro includes the complete works of Shakespeare (41 plays, 154 sonnets, and 6 poems, including “doubtful” works) as well detailed scene breakdowns, character descriptions, and glossaries. It’s an essential app for any classical actor.

This one is interesting because it is also useful for the English teachers and getting the students to memorise the quotes.

Off Book (MMT)

Description

An app designed by an actor for other actors to help with the memorization of lines.

It has a variety of functions but is mainly used for the following;

* Creating scenes
* Recording lines
* Choosing characters
* Muting lines
* Playing cues

Teacher observation

As a teacher I found this a very effective app to use with students when learning lines for performances. It is the first time I have used this and found that the pupils who used and engaged with the app the most were the students that were the most competent when it came to memorizing and recalling their lines.
Why is it effective?

The app works so well because it is interactive and fun. It turns something that is hard work into a game. It also means that students are ‘working’ while ‘playing’ with their phone. Students want to be using their phones as often as possible so it motivates them to do the work. Once the lines have been recorded into the app the students can mute different lines so that everyone else’s lines are played but their own are muted so that they can learn their cues.

Student feedback

Ava “I used it to help me learn my lines and found it really helpful. It really helped me with timing and knowing my cue lines”

Yacine “I didn’t use the app and struggled to learn my lines. I will probably use it next time because other people seemed quicker to learn their line than me”

Teacher observation

Ava knew her own lines by October half term and everyone else’s lines by Christmas. During the final performance she ‘saved’ two people by saying their lines when they forgot. Yacine was still checking his script 5 minutes before the final performance.

2 Memories are made of this (https://www.tes.com/news/memories-are-made-3)

- There are two kinds of memory: short-term, or “working”, memory and long-term memory.
- Short-term: where we hold things that we are working on right now (e.g. memorising a phone number while you dial it)
- Long-term: where information is stored (such as a home telephone number or family birthdays)
- Short-term is limited both in capacity and duration
- Both types of memory work together seamlessly
- If you start giving up and googling information instead, it takes up valuable short-term memory space which does not engage your brain enough - and so, over time, the brain becomes less powerful
- Students would learn better if 3 facts about memory function were adapted into teaching:
  1. **Intensive engagement does not necessarily mean that their long-term memory improves.** Too much ‘cognitive load’ in a lesson can overwhelm short-term memory, which means little learning actually takes place.
  2. **Storage strength (i.e. how well something has been learned) is more important that retrieval strength.** Bjork’s “new theory of disuse” states that once something has been learned, it is never really lost as the memory is still there – the hard part is retrieving it. Students should be tested on what they have been learning at frequent, regular intervals throughout the year. Successfully retrieving something from memory increases storage strength, and the harder something is to retrieve, the greater the increase in storage strength.
  3. **The more confident someone is that an incorrect answer is correct, the more likely they are not to repeat the error when corrected (the ‘hypercorrection effect’)** Self-assessment is the most effective and beneficial way of feeding back on errors, as they are the ones who find out first-hand that the answers they thought were correct were, in fact, incorrect.
- Teachers should aim to plan lessons with activities that limit the cognitive load for students and, with regular testing, allow students to mark their own work to improve on what they remember.
Working memory is the brain's ability to hold pieces of information in mind for a short period of time, and work with that information. It is essential for mental arithmetic and problem solving. If children are fluent in the basic multiplication and division facts, then their working memory is freed up from having to make simple calculations, and can think more deeply about the conceptual underpinnings of solving a problem.

**Maths apps allows learners to work on Maths problems at their own pace**, which can be particularly useful for struggling students who need more time to solve a problem – [Baker, Gersten & Lee, 2002]

Providing immediate feedback to individual learner about their performance which is more beneficial for students with special educational needs than delayed feedback – [Brosvic & colleagues, 2006]

Fluency in times tables is one of many important aims of the UK 2014 National Curriculum. The national curriculum specifies that pupils at this stage should be able to recall the multiplication tables up to and including 12x12. Strategies that offer repeated practice and serve to create “muscle memory” in the brain, simultaneously making it possible for students to retain their number facts and laying the groundwork for more complicated computations and applications down the road.

- The PiXL Times Table App is student focused diagnostic web and app based software that allows schools and students to focus on strengths and areas of weakness. Teachers should make times tables practice part of their everyday teaching which the use of the PiXL Times Tables app would make possible.

- The use of Maths apps is an effective intervention strategy in providing instructional support for struggling students.

- Mobility, fun, colourful visualisations, immediate feedback, opportunity to select levels to support their learning goals and work through the apps at their own pace and have opportunities for competition with other schools were all factors that enhanced student engagement.
Quizlet vs. Vocabulary Notebook: The Impact of Different Methods of Storing and Revising Vocabulary on Students’ Progress, Retention and Autonomy – Mgr. Roman Kálecký

Quizlet (flash card/memory app)

https://theses.cz/id/y0m2m0?lang=en


Quizlet is an online tool/smartphone app that works for learning and memorising key facts in science. It operates on bilateral flashcards and interactive games that it creates automatically from the content. It can be compared to a vocabulary notebook, however Quizlet is a more efficient way of storing, revising and recalling information because it enables students to create their own revision flashcards, as well as to use sets created by others on the spot for any science topic. Students can create set(s) of flash card data depending on the aspect of questioning they want to learn. Teachers can also use the app to create sets to share with their students. When you access a set, there are four different modes in which you can use them: cards, learn, match and test.

How flash cards help students to memorise

1. Flashcards engage “active recall”

When you look at the front side of a flashcard and think of the answer, you are engaging a mental faculty known as active recall. In other words, you are attempting to remember the concept from scratch rather than simply staring at the passage in your textbook or recognizing it on a multiple choice quiz. Active recall has been proven to create stronger neuron connections for that memory trace. And because flashcards can so easily facilitate repetition, they are the best way to create multiple memory-enhancing recall events.

2. Flashcards utilise your metacognitive faculties

When you reveal the answer side of a flashcard to assess your correctness, you are essentially asking yourself “How did my answer compare to this correct answer?” and “How well did I know (or not know) it?” This act of self-reflection is known as metacognition. Research shows that applying metacognition tends to ingrain memories deeper into your knowledge.

3. Flashcards allow for confidence-based Repetition

Because flashcards can be generated stored or retrieved via various apps like quizlet one is able to group them into chunks and use them over and over again. This practice of confidence-based repetition is proven by decades of research to be the most scientifically optimized way to improve memory performance.
**KEY LEARNING:**

- Intensive engagement does not necessarily mean that their long-term memory improves.
- Storage strength (i.e. how well something has been learned) is more important than retrieval strength.
- The more confident someone is that an incorrect answer is correct, the more likely they are not to repeat the error when corrected (the ‘hypercorrection effect’).
- If children are fluent in the basic information this frees up their minds for higher cognitive thinking.
- Flashcards are a useful tool as they allow for confidence based repetition, active recall and the use of metacognitive faculties.
- Apps can help with making the student fluent in basic information across various subjects to free up the time for deeper thinking.

**NEXT STEPS:**

Imbed practice within the classroom. Allow engagement with these apps in silent study/revision time?
Action Research area 4: How to engage the disengaged (Mindsets & Culture)

What successful motivational techniques can be used across the curriculum?

Bonfield, K. Burnett, K. Fali, W. Hadley-Stone, A. Hardwick, J. John, K.

REVIEW OF ARTICLES:

1  https://www.telegraph.co.uk/education/educationopinion/10650825/How-to-engage-the-disengaged.html

We can all recall a disruptive classmate from our school days; the character tactfully referred to as ‘reluctant’ or ‘disengaged’ by school authorities.

When all routes to learning are exhausted, such students are removed from mainstream education to an alternative educational setting – commonly local authority provided Pupil Referral Units (PRUs).

Private sector initiatives therefore exist alongside these units as an alternative to support learners who find themselves unable to engage in mainstream education for reasons including behavioural problems, phobia and anxiety.

Each negative piece of feedback received provides less motivation to excel and leads them to become even more disengaged from academic tasks than before.

Low self-esteem is also a significant barrier for students who can be so frozen by a fear of failure – they feel it is safer not to try at all than to risk embarrassment.

Acts of arrogance and nonchalance often mask deep-rooted insecurities that staff must overcome before they can instill any kind of trust – a key base from which progress can be made.

Once the foundations for a progressive relationship are in place, the curriculum must then be tailored to each student. Learners must know that what they are learning is relevant to their world outside school.

Private provision of alternative education enables freedom over the curriculum, and the majority of our learners achieve the equivalent of 5 GCSEs in vocational subjects, including hairdressing, catering, animal care and construction.

The reasons why a student is a reluctant learner and disengaged are often complex, and educators need to consider not only the student in isolation but also the interaction between the student, the teacher, their peers, parents and the school environment.

To be challenged and supported, these students must first be actively engaged in meaningful, bespoke activities that capture their imagination and ignite a thirst for learning.
The effects of praise: 7 evidence based tips for praising children the right way

https://www.parentingscience.com/effects-of-praise.html

The side effects of praise

The question is posed: does praise help or harm? Experiments have pointed to the fact that some types of praise do not only make the child feel happier, but also increase a child’s persistence and resilience, however experimental data shows that in some cases praise can undermine a child’s motivation and depending on the circumstances, can damage ones self-esteem or fuel the development or narcissism.

Tips on giving praise:

- **Be sensitive to a student’s development level**
  Younger children seem to respond more positively to praise, however older more sophisticated students may interpret praise in negative ways.

- **Be sincere**
  Insincere praise may damage self-esteem and relationships

- **Be specific**
  Praising students for specific tactics offers them blueprint for succeeding again

- **Praise students for traits they have the power to change**
  Children may get the message that intelligence is something that you have or do not have, this leaves students feeling helpless when they make mistakes and severs the ties between effort and success. For these reasons it is better to praise for effort and strategy rather than ability.

- **Beware of praising students achievements that come easily**
  If you praise students for easy tasks they may conclude something is wrong, either the teacher has low expectations of the children, or the teacher doesn’t know how easy the task is, this is unlikely in younger children but older children may interpret very differently.

- **Beware of over praising students for doing things they love doing**
  This is a scenario the article used to display this point

  ‘Adam loves eating broccoli, but every time he eats broccoli his mum praises him. Consciously or unconsciously Adam starts to question his motivation: Am I doing this just for the praise? Adam changes he’s attitude to eating broccoli. It’s a chore, it’s not pleasurable.’

- **Avoid praise that compares students to one another**

  - praise is only motivating as long as the student continues to finish first
  - social comparison praise teaches students that competitive standing, not mastery, is the goal.

**KEY LEARNING:**

- Motivation (intrinsic and extrinsic)
- Praise (helpful or harmful)
- Engagement and mindset
- Home/ school understanding
- Curriculum relatability

Please see appendix 1 for the results of the group’s a mindset questionnaire *(eds.)*
Action Research area 5: Metacognition

How can teachers teach meta cognitive strategies to improve students’ progress?

Bauhofer, T. Fabian, G. Fionda, C. Perkins, D. Vaughan, D.

1 Memories are made of this (https://www.tes.com/news/memories-are-made-3)

According to Dylan Wiliam, teachers need to focus on doing the things that result in the maximum learning for their students. There are two kinds of memory: short-term and long-term. Short-term memory is where we hold things that we are working on right now, such as when we look up a phone number and hold it in our heads while we are dialling the number. Long-term memory is where we hold things such as our home telephone numbers and family dates of birth.

Short-term memory is limited in both capacity and duration. Long-term memory is for all intents and purposes, infinite. So although we can't increase the power of short-term memory, we can make our brains much more powerful by increasing the contents of long-term memory. What separates experts from novices are the differences in long-term memory- experts know more and their knowledge is better organised.

It is possible for students to solve problems successfully without getting any better at solving problems. As students gain expertise, it makes sense to reduce the support given. What matters for long-term memory learning is not retrieval strength but storage strength. Once something is learned, the memory is never lost. To be sure that something has been learned, we should be finding out what students know some time after teaching. Therefore, we should be testing students on what they have been learning at regular intervals. Lots of practice testing, with feedback on errors, is likely to substantially increase students’ long-term recall of what they are learning. The best person to mark a test is the person who just took it. By understanding the distinction between long-term and short-term memory, teachers can think about how to design and present classroom activities in ways that limit cognitive load for students. Then with regular tests where students correct their work, we can improve how much of what happens in classrooms our students remember.


Metacognition is a teachable skill. It is central to other skill sets such as problem solving, decision making and critical thinking. Owen as a teacher realised students were asking him a lot of questions and he wondered why they weren’t asking themselves. There has been a shift in pedagogy towards more independent learning. Some strategies he recommends are: Exit Tickets- for younger adolescents. This is a way of feeding back at the end of a lesson (good for AFL) how and what they have learnt and challenges they still have. Red= ‘today my learning stopped because…'/ yellow= today I considered a question/ idea/ new perspective/ green= today, I understood…

Owen became more interested in the yellow responses that demonstrate more metacognition and helps students become aware of how they are learning.

Another is for the group to ask a question together. The student must consult the group before asking the teacher. If the group can’t collectively problems solve they must simultaneously raise their hand together.

Older students can highlight and annotate their texts before seeing the teacher. This shifts from submission of feedback’ to a more involved process.
3 Metacognition Needed: Teaching Middle and High School Students to Develop Strategic Learning Skills

Struggling students have not developed their ability to reflect on their own thinking (metacognition) thereby being less able to develop and use practical problem solving skills making their learning experience more frustrating and difficult than that of students who have. However Metacognition awareness can be taught and can improve academic and personal development. Students' introspective skills and practical intelligence can be developed through metacognitive instruction and strategies. Struggling learners have gotten used to passive learning and will become anxious when asked to use metacognitive skills, however these can be developed through guided instructions

Classroom practices:
- lessons with 3 components : direct instruction through modelling, ongoing discussion about metacognition and active classroom practice
- use 'writing to learn activities' such as reading logs, self-assessment checklists to develop metacognitive awareness
- explain that successful learning develops through resilience whereas less proficient learners will have a more defeatist attitude, but benefit most from metacognitive instruction. (1. be aware of student's learner type 2. be a learning coach through each step 3. Encourage perseverance to build confidence

Thinking strategies
-think aloud mental modelling: teacher reads a text aloud whilst students follow. The teacher will pause the reading to comment on thinking strategies also emphasising on the students ' need to apply the comprehension strategies

Reciprocal teaching
Step by step exploration. Guide students through a think aloud session:
  1 : generate questions based on the text
  2 : clarify misunderstanding
  3 : summarise
  4 : predict

Discussion about thinking
- Discuss thinking techniques
- Explain thinking process
- Group problem solving ( create a shift form direct recall to application of content, builds awareness of known and unknown)

Self-assessment: encourages students to think about their learning (checklists, reading logs)

Questioning: students should be able to Think, Reflect and Question
- review students prior knowledge of a new topic I.e. write 5 questions on this new topic
- Use pre-reading activities for students to recognise the difference between prior knowledge and new content
Using metacognitive instruction to increase the use of thinking strategies can improve practical intelligence

**KEY LEARNING:**
- Metacognitive awareness / skills can be taught
- Metacognition is one's awareness of their thinking process
- Students need step by step guidance
- Meta cognitive skills are transferable to any subject and to personal and social skills
- Struggling students benefit the most from being taught metacognitive skills
- Teachers should embed strategies for thinking in their lessons as well as content

**NEXT STEPS:**
- Make students aware of what is metacognition and how improving it can make their learning more efficient
- Use exit cards regularly
- Use questioning to find out more about student's thinking process
- Use the think-aloud technique for reading comprehension (WAGOLL of metacognition)
- Teach some metacognition skills in tutor followed by a survey to find out if it made any difference to students learning (resilience/ frustration)
Action Research area 6: Differentiation for assessment

How can we differentiate summative assessments in English?

Zensen, Y. Nelson, J.

REVIEW OF ARTICLES:

What are the possible barriers to attainment in summative assessments and how can we minimise these when assessing student knowledge and skill?

a) Use of quote banks to choose from to minimise poor memory as a barrier to attainment in English Literature assessments

b) Use of writing frames to provide a coherent thinking framework so students can focus on assessment objectives instead of worrying about cohesion and coherence

c) A gloss of the text to clarify meanings, e.g. of Shakespeare

d) A glossary of definitions of challenging words from the text to provide clarity of meaning

e) A word bank to help formulate answers when expressive vocabulary is poor or hindered in students with SLD, SEN or EAL needs

We are using a) and b) across KS3 for the summative assessments for module 3 and will then compare the attainment of a select group of students with their attainment in module 2, and discuss the possible impact of the differentiation and whether it is effective or needs to be further developed.

We will do the same for module 4, but for English Language assessments. Due to the nature of these assessments of working on unseen texts as well as having to produce an extended piece of writing, the differentiation for these assessments will need to be different to those for English Literature.

KEY LEARNING:

Unfamiliarity

Differentiated materials make assessment less daunting; provide a framework for organising content

SEN

Quote banks provide information so students did not have to rely on memory - less to process; writing frame minimises amount of writing and helps organise and formulate ideas

EAL

Quote banks, key words and definitions help provide vocabulary and minimise information to be retained; writing frame helps with constructing sentences
SLCN

- Writing frame provides framework for communicating ideas; quotations minimise anxiety over spelling for dyslexic students
- Low confidence and anxiety
- Writing frames and quote banks reduce anxiety around exam performance as they support memory and expression

NEXT STEPS:

- Investigate which strategies best support EAL
- Try out ways of differentiating for AO2 and AO3
- Find a way to slowly withdraw scaffolding and differentiation across modules to promote independence
- Investigate other strategies to improve retention of knowledge (e.g. quotations, context) to support independence
Appendix 1: Mindset questionnaire

This is a summary of a survey of 30 Y7 pupils and 25 Y9 pupils, carried out June 2018

1. What’s your best way of learning? ____________________________________

   Year 7 mainly focused on listening as their best way to learn with examples coming in second. Year 9s included several options including listening, group work, supportive environment and clear explanations.

2. Do you prefer working on your own, in pairs or in groups? _______________

   Year 7 had a majority of students saying group work with an even split for individual and pair work. Year 9 chose groups work with very few saying pairs and only one individual.

3. How do you feel about presenting work in front of the class?
   a. Don’t mind Yr. 7 54% Yr. 9 57%
   b. Comfortable Yr. 7 77% Yr. 9 0%
   c. Uncomfortable Yr. 7 25% Yr. 9 35%
   d. Unsure Yr. 14% Yr. 9 9%

4. What do you think stops you from learning in class?
   a. Yourself Yr. 7 21% Yr. 9 30%
   b. Teacher Yr. 7 29% Yr. 9 22%
   c. Friends Yr. 7 25% Yr. 9 39%
   d. Topic Yr. 7 36% Yr. 9 39%

5. What helps you learn? _____________________________________________

   Year 7s mentioned several items more than once including peers, listening, books, teachers and having no distractions. Year 9 mentioned teachers, fun, control, working alone.

6. How do you value yourself within the school?
   a. Important Yr. 7 36% Yr. 9 26%
   b. Not very important Yr. 7 39% Yr. 9 49%
   c. Not important Yr. 7 18% Yr. 9 13%

7. Do you think your opinion matters with the school?
   a. Yes Yr. 7 21% Yr. 9 22%
   b. No Yr. 7 21% Yr. 9 49%
   c. Sometimes Yr. 7 46% Yr. 9 35%

   Why?______________________________________________________________________

   Year 9 repeatedly mentioned that their opinions don’t matter while Y7 said that sometimes it makes it better.
8. Do you want to be in school?
   a. Yes  
   b. Made to be here  
   c. No
   Yr. 7 29% Yr. 9 52%  
   Yr. 7 10% Yr. 9 26%  
   Yr. 7 61% Yr. 9 13 %

9. Do you like coming to this school?
   a. Yes  
   b. No  
   c. Sometimes
   Yr. 7 18% Yr. 9 39%  
   Yr. 7 18% Yr. 9 4%  
   Yr. 7 57% Yr. 9 61%

10. Do you regret coming to this school?
    a. Yes  
    b. No  
    c. Sometimes
    Yr. 7 18% Yr. 9 4%  
    Yr. 7 36% Yr. 9 52%  
    Yr. 7 43% Yr. 9 40%

11. Do you have enough time to finish written tasks in class?
    a. Yes  
    b. No  
    c. Sometimes
    Yr. 7 29% Yr. 9 48%  
    Yr. 7 4% Yr. 9 18%  
    Yr. 7 57% Yr. 9 35%

12. How much time do you think you need to complete a paragraph? __________

   The majority of student in both year 7 and 9 state that they need between 10 to 15 minutes to write a proper paragraph.

13. Do you think you are prepared for assessment?
    a. Yes  
    b. No  
    c. Sometimes
    Yr. 7 32% Yr. 9 18%  
    Yr. 7 29% Yr. 9 4%  
    Yr. 7 43% Yr. 9 87%

   Why?___________________________________________________________

   Year 7s said they are prepared if they revised and are unprepared if they didn’t revise. Year 9s mainly spoke about revisions with to why they are somewhat prepared for assessments.

14. What are the qualities of a good teacher? (Circle all that you think)
    a. Humorous  
    b. Strict  
    c. Organized  
    d. Fair  
    e. Honest  
    f. Respect  
    g. __________
    Yr. 7 46% Yr. 9 60%  
    Yr. 7 11% Yr. 9 9%  
    Yr. 7 36% Yr. 9 74%  
    Yr. 7 68% Yr. 9 87%  
    Yr. 7 43% Yr. 9 57%  
    Yr. 7 64% Yr. 9 65%
15. What makes a good lesson? (Circle all that you think)
   a. Varied Yr. 7 9% Yr. 9 22%
   b. Group work Yr. 7 43% Yr. 9 96%
   c. Individual work Yr. 7 18% Yr. 9 39%
   d. Quick Yr. 7 11% Yr. 9 13%
   e. Kahoot Yr. 7 71% Yr. 9 70%
   f. New vocabulary Yr. 7 18% Yr. 9 26%
   g. Engaging Yr. 7 14% Yr. 9 52%
   h. Relevant Yr. 7 7% Yr. 9 35%

16. How would you describe your worst lesson? ____________________________
    ____________________________________________________________________

Both Year 7 and 9 describe their worst lessons in terms of being boring, noisy and getting no work done. There seems to be a great deal of disengagement being a main reason in year 9 where the year 7s discuss ‘getting in trouble for no reason.”