

Issue 1 | Summer 2015

ANTHECOLOGY

Lesson Study Journal
Samuel Whitbread Academy



Foreword



Foreword

Lesson Study is a way of being a highly professional teacher and a way of running an excellent school that understands its learners and what and how they are learning in great depth.

A senior Japanese education leader recently told me that in his view, over the 150 years or so that it has been practiced in Japan, Lesson Study has become such a natural, unconscious part of being a teacher or school leader that the Japanese have become unaware, unconscious of it as a process separate from any other aspect of their professional lives. The migration of Lesson Study to the rest of the world this century has, for the Japanese, thrown Lesson Study into relief enabling them to see it with fresh eyes.

And yet paradoxically, what makes Lesson Study such a great tool for professional learning is precisely its ability to help us as teachers and leaders to see our own practices afresh, to see our learners with 'x-ray specs' and to discover that often they are not learning as we had imagined they were and that we therefore need to adjust the way we are teaching them in order to help them learn and progress better.

This process of collaborative, deliberate investigation of pupils' learning, as teachers try out and study new, informed practices in their classrooms, builds strong communities of teacher-learners, enquirers, researchers. These communities are united in the joint endeavour of helping their students to learn more effectively and deeply by jointly studying and problem solving in great detail, aspects of their students' learning in lessons. They take risks, focus on the hardest to learn, teach parts of the curriculum and help the hardest to reach learners to improve. Doing this together in this way almost uniquely enables them to tap into each others' stores of unconscious tacit knowledge of teaching (Dudley, 2013).

And then, very importantly, they pass on this knowledge to their colleagues in ways that both engage them and help them to see how they could use the approach in their own classrooms. The teaching profession in the West has been singularly hampered in its ability to do this because of its preference for lone teaching and because of the challenge that leaders of learning face the world over – that of making visible, conscious and transferable, the tacit, unconscious know-how that makes up the vast majority of teachers' practice knowledge.



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Anthecology

This booklet presents a collection or an arrangement of the latest discoveries in learning, teaching and curriculum that have been shared in engaging, practical and easy to use forms by a school's teachers for its teachers. The authors have chosen the title 'Anthecology' : the study of pollination.

Since 2011 the staff at Samuel Whitbread Academy have been constructing a live environment that supports and nurtures reflective, collaborative teacher learning in order to advance the collective professional knowledge of the school for the benefit of its students. When it exists in an institution as such a deeply embedded, collective practice, Lesson Study does indeed create a culture that strongly supports such advancement. It takes place in the classroom with pupils. It draws on their perspectives as well as those of peer teachers. It draws on well-evidenced knowledge from outside and from the classroom itself and thus becomes a bridge between research and classroom practice: as an enquiry method it has ecological validity.

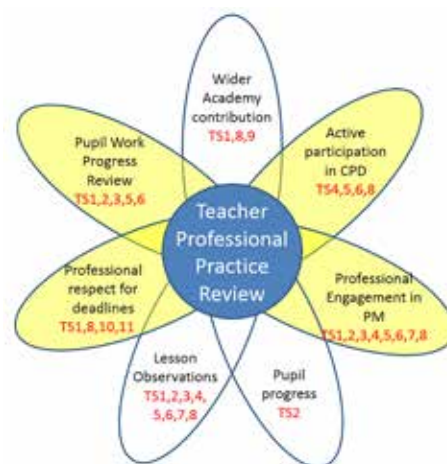
In publishing this 'Anthecology', Samuel Whitbread Academy is following in a long tradition from Japan where teachers publish their lesson studies and schools publish compendia of these each year for their staff, their parents and community, and for schools in their locality.

Left is a 93 year old example of just such an annual school compendium. There is evidence that when teachers advocate their new practice to others the changes in their own practice are strengthened (Dudley *ibid.*).

The lesson studies and resources that fill this booklet were not created by the Lesson Study groups in order to sit on shelves in a booklet. They were created first and foremost to advance the learning of their students and to do this by advancing their own practice knowledge. Then, at the end of a twelve month period of development and research they were shared in an active 'market place' event involving all teaching staff.

So read this with interest, but also with an active critical eye, reflecting on which of the ideas contained in these pages might just be something that you may find it worth while to try out, adapting and perhaps adopting in your own classroom in the coming months.

Professor Pete Dudley



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Introduction

Developing a research-based school improvement system

We are currently at a very interesting point in our journey to what CUREE calls an exceptional school. In our attempt to create what David Hargreaves (2011) describes as a self-improving school system we have interwoven the four elements of self-evaluation, development planning, performance management and continuous professional development centred around a model of evidence-based action research to create what we hope will become a powerful model of school improvement. What we did not expect was how quickly the idea would embed itself into the way we work as a school and how quickly it would start to pay dividends; something which is now generating considerable interest from other academies and academics alike.

The question we asked ourselves at the start of our journey was:

“Why do we teach?”

If lawyers practise law for a just society and doctors practise medicine for a healthy society then why do teachers teach? We soon came to the conclusion that the answer is because teachers feel they have a moral duty to create a learned society. And, if learning is at the heart of the teaching profession then surely it is important that teachers be, and be seen to be, learners. The idea of the reflective practitioner is not new; in the publication ‘Why Colleges Succeed’, Ofsted (2004) recognised that...



“The most distinctive of these very good teachers is that their practice is the result of careful reflection... they themselves learn lessons every time they teach, evaluating what they do and using these self-critical evaluations to adjust what they do next time.”

Lesson Study

So how should teachers best share, develop and reflect upon their practice? For the last four years we have been working hard as an academy to place Lesson Study at the heart of our model of school improvement. The reason we are willing to invest time and resources into this model is because we believe Lesson Study is the best vehicle we have seen for unlocking, developing and sharing the expertise within our teaching staff. This drive to foster a practitioner-led professional learning community, which recognises the pedagogical expertise of its members, is a theme frequently referred to in educational literature. Teele, Maynard and Marcoulides (2015) make specific reference to this in their study into using Lesson Study to develop pedagogy to ‘narrow the gap’ and the consequential development of a powerful professional learning community across the staff involved. Although we are at the early stages of our journey, our own findings resonate with Teele, Maynard and Marcoulides (2015).

How do we share the findings of our action research?

How do teachers share good practice in your school? It is a challenge we all face, but one that we have to solve as a profession if we are ever to create a system of self-improving schools. We have tried two different methods this year: the first method is called the Market Place and the second is this Anthecology.

The Market Place

For the last two years, on the morning of the Easter training day, each of the 40 lesson study triads from all across the academy shared their thinking, their successes, their challenges and their aspirations. The atmosphere was electric; you could hardly hear yourself over the noise of everyone talking to each other about the findings of their action research projects. To get a feel for the event and how it is planned and executed, why not read our blog at www.lessonstudy.co.uk

The Anthecology

In David Hargreaves' (2003) booklet 'Education Epidemic' he describes the transfer of practice around a system as like a virus. The metaphor is a powerful one, but we have always had an issue with the idea of a virus because they are often aggressive and sometimes destructive in their nature. So this year we have been developing what we believe to be a more collaborative and creative metaphor of pollination and



hence the title of this series of booklets: Anthecology - the study of pollination, in which we hope to share and reflect upon what we discover over the coming years.

Closing thoughts

Participation in school - based action research and development has challenged and developed our thinking about our approach to school improvement at all levels in the academy. Similar to the findings of Maxwell and Greany (2015) the participation in collaborative research and development has started to build our collective confidence and engagement in the process of open, honest and formative reflection as part of an action research approach to improvement planning at Academy, Department and Teacher Appraisal level. All of these critically important activities are now structured around research questions.

This fundamental change in our approach has been driven by the momentum from the staff for collaborative, research-based, pedagogical development. Their honest feedback, not always positive, has been - and will continue to be - instrumental in shaping our approach. The continued sophistication of our capacity for pedagogical discourse, teacher imagination, risk taking and the sharing of ideas, all informed by the evidence of 'case student' learning (Dudley, 2013) is the driving force behind this Anthecology and future of improvement at Samuel Whitbread.

Dave Goode & Nick Martin

Lesson Study

What is Lesson Study?

“Lesson study is a form of research that teachers engage in as active participants which deal directly with their own classrooms and the learning of their students” (Hall, 2014).

According to Dudley (2014) lesson study is where “a group of teachers work together to improve the learning of their students and to develop ways of teaching them to help them to overcome barriers or difficulties they are encountering in learning, often in learning some very specific aspects of the curriculum” (Dudley, 2014).

The lesson study process is conducted through a cycle of joint planning, observation and review sessions where each group member is actively involved in each step of the process and the views of students are sought. (See Figure 1)

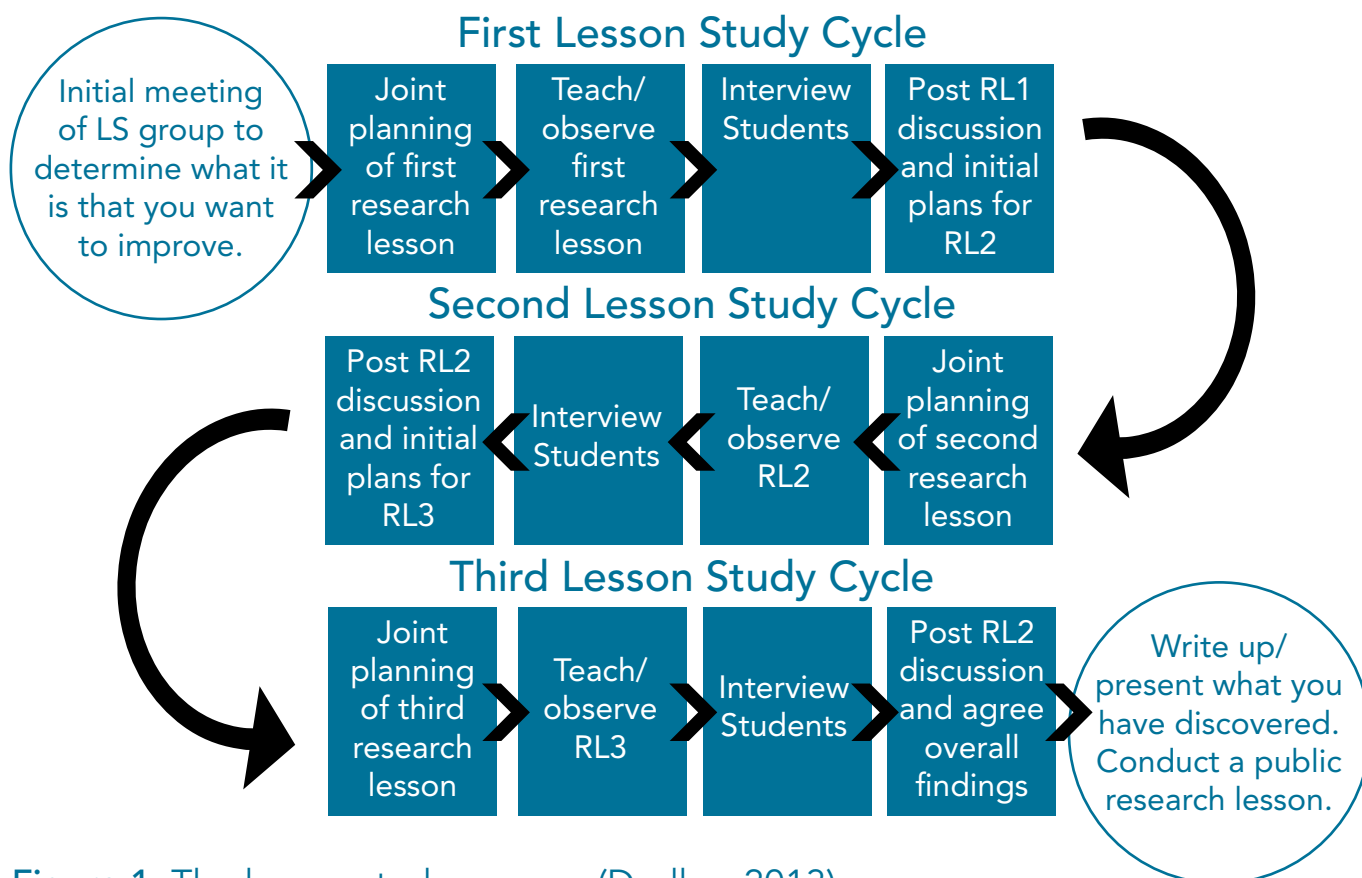


Figure 1: The lesson study process (Dudley, 2013)

How is Lesson Study used in Samuel Whitbread Academy?

In Samuel Whitbread Academy, as part of our work with Cambridge University, SUPER network, lesson study is used in three ways: Academy Lesson Study, Department Lesson Study and Laser Lesson Study. (See Figure 2)

What does Lesson Study look like at SWA?

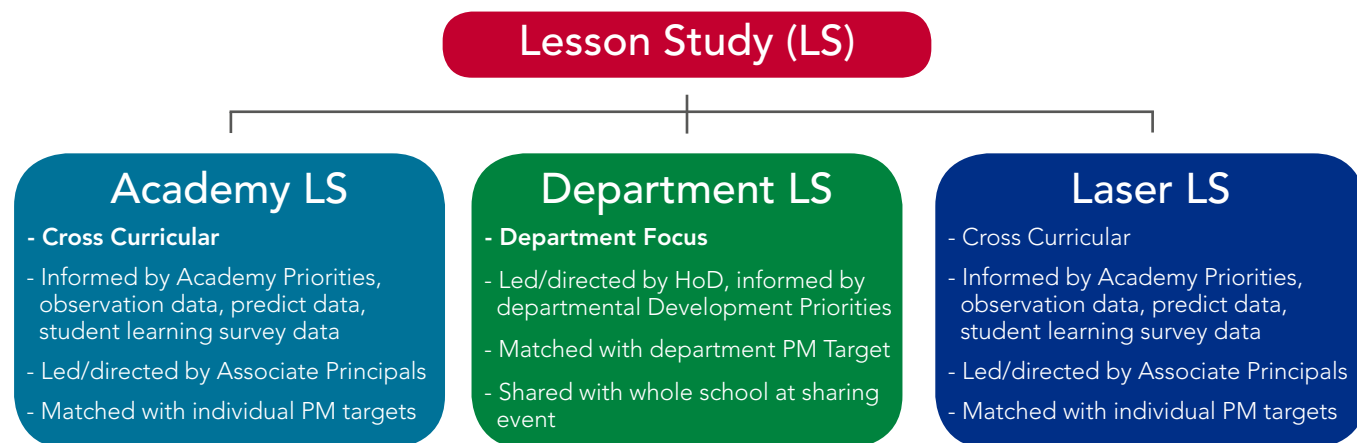


Figure 2: The three ways Lesson Study is used at Samuel Whitbread Academy

Academy Lesson Study (ALS)

Academy Lesson Study is informed by the Academy's priorities outlined in the School Development Plan. This year we concentrated on 3 key academy goals: to improve active engagement, to embed effective challenge and differentiation and to develop consistent feedback. Using the collaborative approach of Lesson Study, 11 triads co-planned lessons around the above pedagogical foci. During the Autumn term, around 130 teachers were grouped according to their personal Performance Management target and either co-planned or observed the relevant lessons concentrating on the impact of the key pedagogy to improve learning. In the spring term, while concentrating on the same academy goals instead of using students, it was the teachers who 'acted as the learners' and experienced first-hand the planned pedagogy. Here they were given differentiated student profiles so that they could provide inspiring responses from a learner's perspective.

Department Lesson Study (DLS)

Each department creates department lesson study (DLS) groups that are made up of three or four teachers. The teachers then have an initial meeting in consultation with their Head of Department and with reference to their performance management targets, to decide on an issue that they want to research and solve or improve during the academic year.

Time is allocated throughout the year for collaborative planning, observation of the learning and a review which includes student feedback.

As the focus of a lesson study is to improve the learning of students, one of the essential elements is the focus on case students. The lesson that the teachers plan is written around the intended response from the case students to the activities planned (*See figure 3*).

The observation of the lesson then focuses on the actual responses by the students and this, along with interviewing students after the lesson, is used to analyse and refine the activities for a second lesson which is jointly planned.

After the two or three cycles of planning, observation and review some conclusions can be drawn from the lesson study which are then presented at the market places.

Lesson Study 2014/2015		Planning and Observation Record			
Teaching teacher: KB	Observing: LNY; AMU; PJO	Class: 10E		Date/period: 8th Dec, P.3	
Which specific teaching focus is this study lesson aiming to develop? Deconstructing 5 mark questions... new 5 mark resource					
		Student A:		Student B:	
Relevant Detail: Why are they your case students?		She is a 4b PA student who is one of our focus students for both my PM1 and departmental PM2. Her current predict shows 3LOP		She is a 4c student, again my PM1 target cohort and PM2 departmental. She is currently under achieving (which is why she is my case student).	
Lesson Plan: (Learning Activities & Questions)	Pedagogy Explained: (What will the teacher do in order to bring about the desired behaviours in the case students?)	Expected Student Response	Actual Student Response	Expected Student Response	Actual Student Response
Starter: identifying aspects of cultural deprivation. Then ranking them. NK - teaching to provide NK with deeper information regarding cultural deprivation.	Teacher to circulate class with prompts for further ideas and differentiated questioning. Whole class questioning - differentiated according to ability. Teacher will question Student A and B and give them wait time.	When teacher supports she will listen and engage; she might support her partner too with ideas. Will be challenged and will slowly reach the expected understanding.	Able to justify answers. Was able to help partner and develop material -	She will engage, but might choose slightly incorrect answers. Teacher will support with prompts to clarify her understanding. Will be challenged and will slowly reach the expected understanding.	Questioned - unsure of answer. Placed ideas on a post-it note.

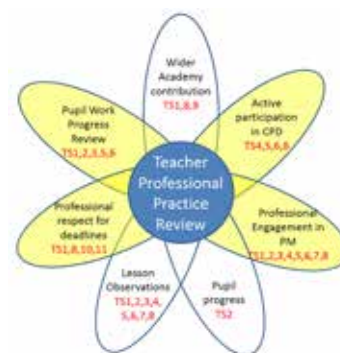
Figure 3: Lesson Study Planning & Observation Record

Laser Lesson Study (LLS)

Laser Lesson Study is an optional part of the Academy's Continued Professional Development (CPD) menu. During our term of 'experiment and risk' teachers can opt to fine-tune their individual Performance Management target by joining with fellow teachers with the same target to create a cross-curricular triad. The same collaborative Lesson Study approach is adopted (outlined above) allowing the teachers to take risks and learn together from their joint seeing and understanding of how their students are learning and progressing.

Connecting Lesson Study to school improvement.

Over the last four years, we have placed Lesson Study at the centre of our school improvement process. By connecting self-evaluation, development plans, performance management and CPD together into one synergistic system with Lesson Study at the heart, we have created what we believe will be a powerful new paradigm for school improvement. And above all, it enacts teachers as learners!



Dave Hall, Sally Baki & Katie Bridge

Context

Samuel Whitbread Academy is a large rural upper school (Years 9-13) of 1700 students which includes 450 in the Sixth Form and is the largest school in Central Bedfordshire Local Authority. We have come a long way in the last few years and we are now one of the highest ranked schools in the local area for results at both GCSE and post 16 levels.

We are part of Bedfordshire East Multi-Academy Trust - BEMAT which educates over 3,000 children in 6 schools. Samuel Whitbread Academy is also a member of Bedfordshire East Schools Trust - BEST which provides capital and community projects as our locality goes through considerable demographic growth.

We have been using Lesson Study at Samuel Whitbread Academy as our primary vehicle for improving teaching and learning for the last four years and we are confident that it has significantly raised the standard of teaching in the school. This Anthecology is a collection of all of the work completed by the Lesson Study triads this year at Samuel Whitbread Academy.

Acknowledgements

We would like to thank the SUPER network and Curee for their support in helping us develop a research culture throughout the academy.

We would like to thank Pete Dudley and Hiroyuki Kuno for their support and inspiration over the last four years in the development of our Lesson Study journey. They both have a fantastic ability to balance support and challenge to push you forward in your thinking.

Finally we would like to thank GallifordTry for funding the print run of the first edition of the Samuel Whitbread Anthecology.

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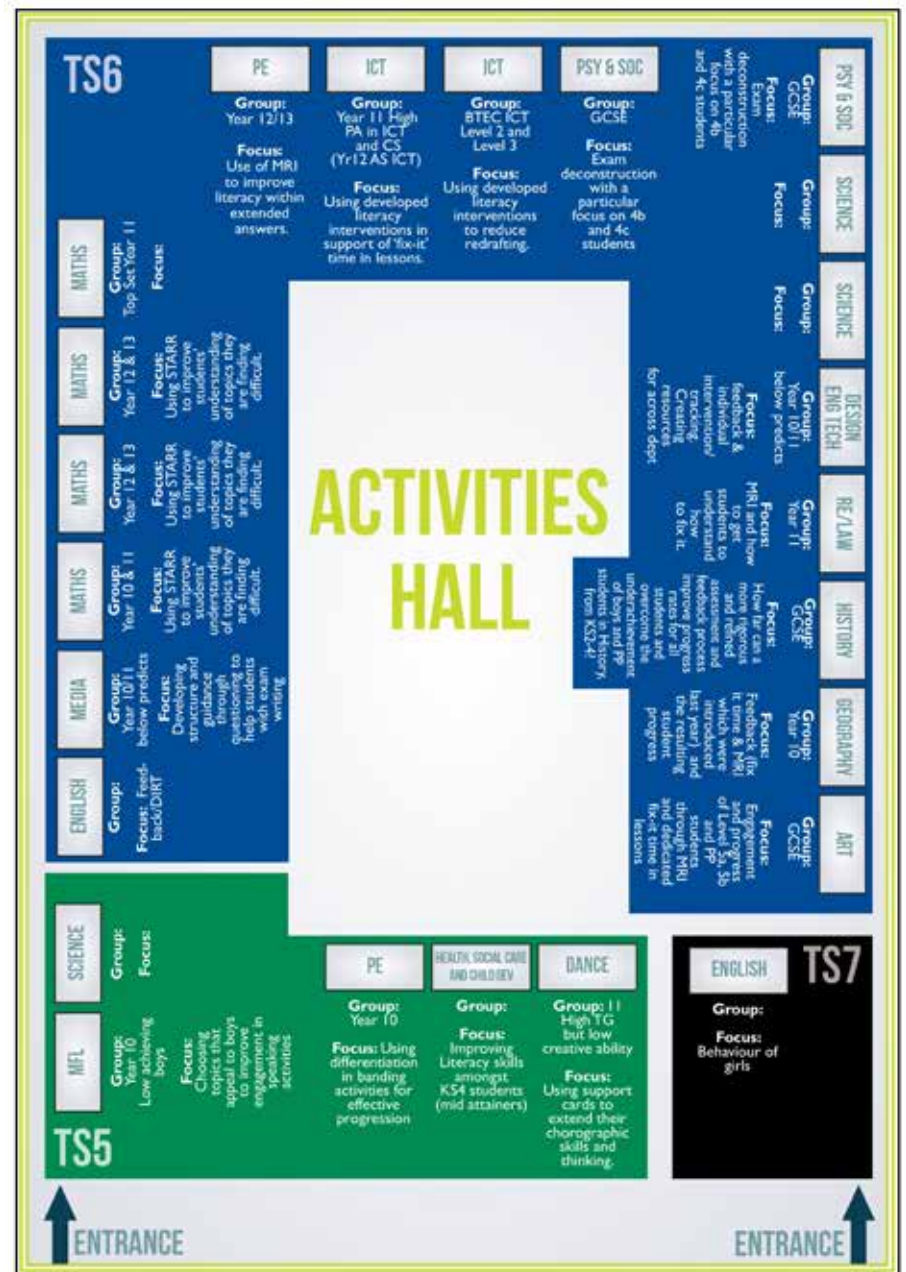
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Market Place

The DLS sharing event was an opportunity for triad members to present the research they had been undertaking to members of the school and teachers from other schools.



“ The Market Place was an excellent place to share my research and find out about what others are doing. ”
- Arron Beckett

“The work Samuel Whitbread are doing to transfer new and innovative practice across the school is truly ground-breaking.”
 - Frank Cornelissen (Research Fellow - Cambridge University)

THEATRE

TS4

- ENGLISH**: Group: Focus: Scaffolding
- PE**: Group: Year 10 Focus: Quizzes, training and an effective tool of assessment
- GEOGRAPHY**: Group: 10K, 10L, 10H Focus: Six understanding & not being engaged to do well in the subject

TS6

- TEXTILES**: Group: Year 13 Focus: Developing understanding of theory and how to apply it to exams
- MUSIC**: Group: Year 11/5cs Focus: Pushing to A grades (a few B grades) Strategies for lazy boys to be independent in comp. work
- SCIENCE**: Group: OCEAN Focus: Exam deconstruction with a particular focus on 4b and 4c students
- SCIENCE**: Group: Focus:
- SCIENCE**: Group: Focus:
- DRAMA**: Group: Focus:

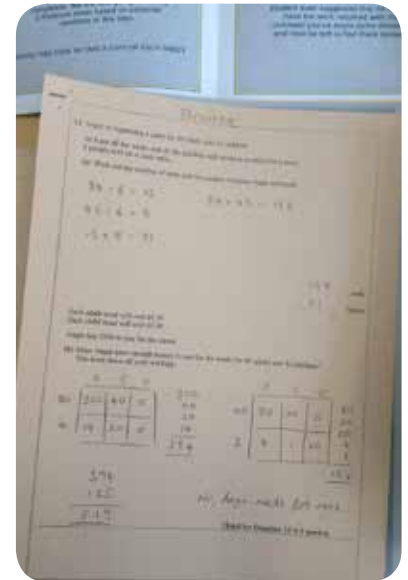
TS2

- ENGLISH**: Group: 9, 10, 11 Focus: Live and interactive mats and other resources to increase progress by the use of more subject specific technical language.
- BUSINESS**: Group: Focus: Dedicated literacy lessons in lessons
- BUSINESS**: Group: Year 12 Focus: Dedicated numeracy and literacy time in lessons

TS1

- ENGLISH**: Group: Focus: Mindset of C/D students

ENTRANCE ↑



“Why don't my C/D borderline students remember what they've learned?”

Issue

Students' confidence in exams is greatly affected by the way in which they view tests, which can have a negative impact on knowledge retrieval.

Conclusion

Many studies from cognitive science suggest the importance of a culture of low-stakes testing to enhance student self-confidence in exam environments. Frequent quizzing interrupted forgetting and helped the teacher recognise that students were learning as well as they appear to be. It also exposed the areas where extra attention was needed.

Lesson Study Highlight:
Members have read previous research literature to inform planning

Audience:

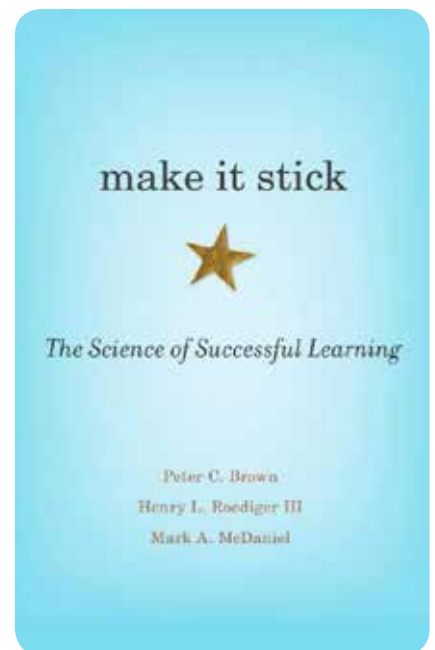
Teachers/departments interested in using cognitive science to meet the demands of the new GCSEs.

Research question:

To what extent does low-stakes testing improve exam confidence and retrieval strength?

Action:

Teachers integrated multiple choice questions (MCQ) into each lesson and homework. MCQs can have a variety of benefits, such as making student understanding and misunderstanding more evident for the teacher; allowing marking and feedback to become far less arduous; as long as the questions are challenging enough, the assessment is more reliable. Furthermore, we introduced 'Memory Platforms' (Tharby, 2014) during the first 10 minutes of every lesson. This review is a memory task - a task in which each individual, on their own, is compelled to retrieve information from their memory without recourse to any cues or materials. This also meets Birnbaum, Kornell, Bjork & Bjork's (2013) concept of spacing (the need to space-out retrieval) and interleaving (that learning things side-by-side is more beneficial than in a mass).



Findings:

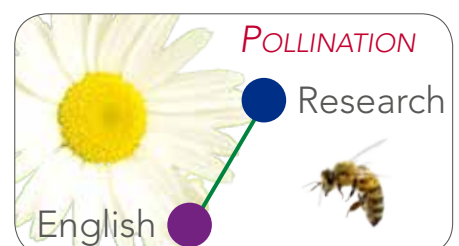
- Students appeared to have greater self-confidence in exam conditions, evident in fewer questions of clarification asked by students and teacher scaffold support needed.
- MCQs in class yielded a large improvement in final exam scores.
- Students enjoy the 'openness' of multiple choice question, knowing that in English all subjective responses can be accurate, but students now enjoy debating 'the most correct right answer'.

Next Steps:

Improve the transfer of knowledge between units of learning and look deeper into the research regarding the different forms of quizzing to maximise impact.

Members:

Ben Morris, Steven Fothergill and Holly Wilmot (English)



“Developing analysis and evaluation in students’ written answers”

Issue

KS4 students struggle to extend their analysis and evaluation.

Conclusion

Most students used the structures provided, with some understanding the requirements of the assessment objectives. However, there is a need for more skills based lessons in the schemes of learning to support further improvement in progress.

Lesson Study Highlight:
Triads have used the lesson study framework for planning and observing

Audience:

KS4 teachers interested in supporting their students writing answers to examination questions which require an extended response.

Research question:

To what extent does the support of students' literacy improve the progress of our low and middle attaining students?

Action:

Use of a recommended structure for GCSE Business 9 mark questions. Development of a student friendly self/peer marking sheet providing EBIs and MRIs.

GCSE Business - Judging your progress on 9 mark questions

Allocation of marks on a 9 mark question:

A01 Knowledge = 1 mark	A02 Application = 1 mark	A03 Analysis = 2 marks	A03 Evaluation = 5 marks
------------------------	--------------------------	------------------------	--------------------------

1. Mark your own work and allocated EBI/MRI:

Award your marks for A01/A02/A03 as appropriate		Where a mark is not gained - use EBI and appropriate MRI		
Have you?	Marks to be awarded	Possible target (EBI)	MRI	
a	Stated an advantage and a disadvantage	1 (A01)	To learn the advantages and disadvantages of the key term.	state your advantage and disadvantage
b	Are both these points relevant to the case study?	1 (A02)	To select the relevant points from the case study.	state your new points for and against
c	Explained for each point why it is good or bad for the business	1 (A03 analysis) for each explanation (maximum of 2 marks)	For each point you must say what this means for the business why it is an advantage or disadvantage.	Add your analysis to each point (use a different colour pen)
d	Reached a conclusion	1 (A03 evaluation)	Always reach a conclusion	Add a conclusion to your answer
e	Given a reason for your conclusion	1 (A03 evaluation)	Give a reason for your conclusion	Add a justification to your conclusion
f	Weighed up the 2 points discussed to reach your conclusion	1 (A03 evaluation)	Explain why you can discount the opposing argument.	Rewrite your conclusion showing that you have explained your reasoning.
g	Is your conclusion relevant to the case study	1 (A03 evaluation)	Ensure your conclusion uses information from the case study.	Apply the information to your conclusion from the case study (use a different colour pen)
h	Has your answer the wow factor (is the whole answer relevant and appropriate to the case study?)	1 (A03 evaluation)	You state the key issue of the business from the case study.	State and describe the key issue for the business.
Maximum total marks available = 9				

2. Now break your marks down into the following categories.

AO?	Marks
A01 Knowledge	/ 1
A02 Application	/ 1
A03 Analysis	/ 2
A03 Evaluation	/ 5
Total	/ 9

3. Award yourself a grade as follows:

Mark	Grade
9	A*
8	A
7	B
6	C
5	D
4	E
3	F
2	G
1	U

Findings:

All students used the structure and extended answers, and improved progress was evidenced. The most progress was demonstrated by the middle prior attaining students. The self-marking sheet provided a fast turn-around of the feedback cycle, allowing students to construct, answer, mark and improve in one session.

Next Steps:

Developing an interest in the writing of extended answers for disengaged students.

Members:

Helen Bibby, Natasha Rider and Claire Denny ([Business](#))

“Developing analysis and evaluation in A2 business students’ 40 mark essays”

Issue

KS5 Business students struggle to extend their analysis and evaluation. This has been evidenced in lower grades achieved in the Unit 4 paper compared to the other 3 units.

Conclusion

All students benefitted from planning their responses. The most notable improvement was from the students with the predicted grades of Ds.

Lesson Study Highlight:
Triads have used the lesson study framework for planning and observing

Audience:

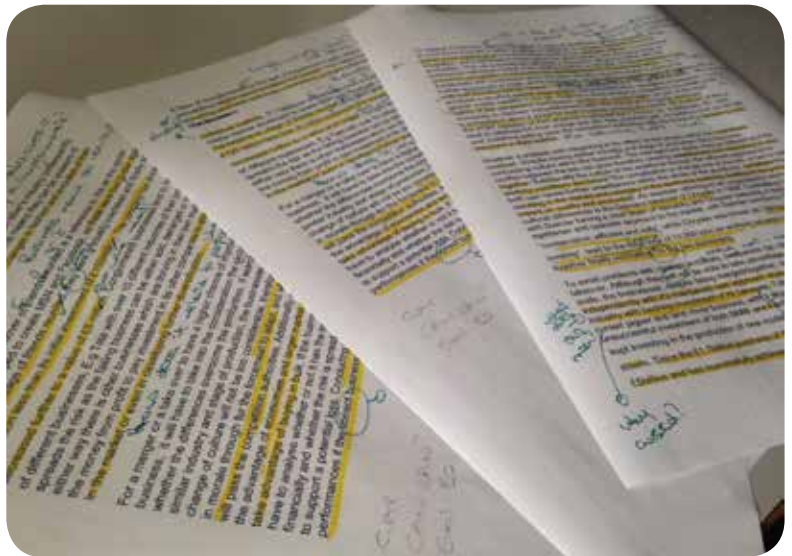
KS5 teachers interested in developing students' responses to extended writing.

Research question:

To what extent can the use of an essay planning framework improve the progress of A2 Business students in the Unit 4 40 mark essay question?

Action:

Use of a planning sheet which encouraged students to state their key arguments with relevant supporting evidence. A counter argument of their point again with relevant supporting evidence. As well as an opposing argument. The sheet also provided prompts for extending evaluation.



Findings:

All students used the planning sheet and all students' essays improved. The improvement in progress was most notable for students with A2 predictions of D or E.

Next Steps:

Addition of skills based lessons to the KS5 schemes of work.

Members:

Anne Williams, Victoria Jane and Claire Denny (Business)

“Using writing frames to improve written analysis”

Issue

Students are not writing effective or thoughtful MRIs, preferring meaningless, fragmentary statements such as 'must try harder'.

Conclusion

Standard of MRIs improved significantly by students - sentence structure and vocabulary became more developed and relevant; understanding of need and purpose of MRIs also improved.

Lesson Study Highlight:
Triads have used the lesson study framework for planning and observing

Audience:

Anyone developing effective MRIs.

Research question:

To what extent can modelling MRI sentences improve MRI understanding, construction and lead to an improvement in finished written work?

Action:

Create modelled MRI sentences for a particular piece of course work and in line with assessment objectives, differentiated for grade and dyslexia. Students are shown illustrative models and asked to replicate. Year 10 students use the models to create their own versions, prior to adapting their own work based on their MRIs.

Findings:

MRI sentences improved, understanding of MRI purpose improved, understanding of MRI expectation improved - students were able to use MRI tasks to improve their own work.

IGCSE English Language Course Work 2:
Creative Writing MRIs: Band 3

10 I will correct ten of my highlighted spellings using a dictionary.

English Dictionary & Thesaurus

I will improve one of my paragraphs by adding two extra sentences that develop ideas in more detail, using compound sentences to do this.

2 She cooked.
He cleaned.

I will improve detail by rewriting the paragraph on my character / setting, including more description by using adjectives.

3 Rewrite three sentences adding 1 simile (a comparison using 'like' or 'as'), 1 metaphor (e.g. 'cold hearted') and 1 other language device to include a RANGE of language devices.

simile oxymoron hyperbole alliteration metaphor

Rewrite the highlighted sentences using correct grammar and sentence structure (read it aloud to check).

Next Steps:

Now students need to undertake the same process with 'how to improve MRI responses' (how the actual responses should be improved, not simply the MRIs themselves).

Members:

Paul Constant, Erika Harvey and Jacqui Hopkins (English)

“Using questioning as an effective tool of assessment”

Issue

Being able to combine questioning and differentiation to stretch all students' knowledge using Blooms' Taxonomy (1956) action verbs.

Conclusion

It is simple and effective. When used in well-timed periods of the lesson it can facilitate higher order and more indepth pupil responses. It is a technique that can be developed and perfected without the need for extensive training or resources outside the requirements of normal teaching and therefore it can be simply integrated in to any teacher's repertoire.

Lesson Study Highlight:
Members have read previous research literature to inform planning

Audience:

Teachers/departments interested in developing their assessment strategies through high order questioning.

Research question:

To what extent do different types of questioning have an effect on mid PA students?

Action:

After working together we created a list of Blooms' Taxonomy (1956) action verbs that identified the appropriate keyword to develop differentiated questions.

Findings:

The technique did facilitate the promotion of higher order detailed responses from a range of students, encouraging contributions from all students including those often either unable or reluctant to answer. It teased out understanding and misconceptions, the questioning process was engaging, interactive and at times lively. This was an element of the lesson that the students readily took part in and one of its most valuable parts. As a result there were far less students claiming to not know the answer, less blank faces and more engagement and contribution from the class as a whole.

POSE PAUSE POUNCE BOUNCE TECHNIQUE

The 'Pose, Pause, Pounce, Bounce' technique structures questioning in to four key stages to ensure that pupils have thinking time, that a range of pupils are selected and that pupils work together collaboratively rather than competitively exploring ideas and building on each others responses.

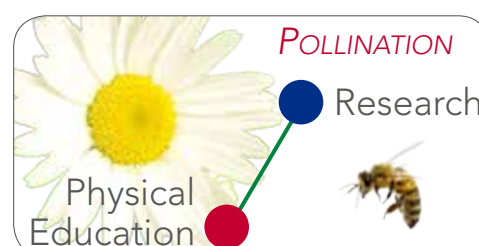
- Pose: higher order questioning.
- Pause: wait time.
- Pounce: hands down and random pupil selection.
- Bounce: involving multiple pupils.

Next Steps:

To use the questioning technique with developed action verbs, to promote higher order questioning to stretch and challenge all students' learning needs.

Members:

Emma Wisson, Jimmy Hart and Jason Goldman
(Physical Education)



“Differentiating to engage”

Issue

Year 10 Geography students who have found engagement difficult.

Conclusion

The activities led to an improvement in the levels of engagement for most students, and as they mature they are more able to cope with the demands of the course. There are one or two students whose behaviours are more challenging and who are harder to move forward.

Lesson Study Highlight:
Department members have planned the lesson collaboratively

Audience:

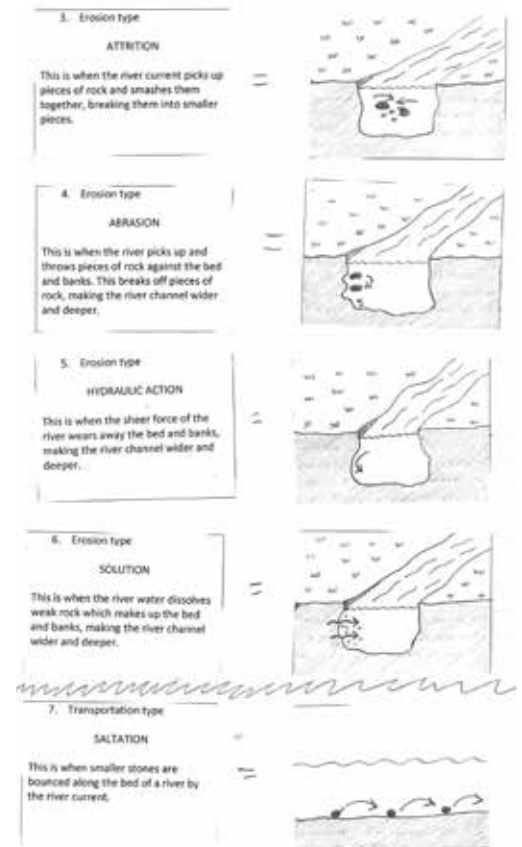
Teachers of GCSE Geography.

Research question:

To what extent can DLS bring about greater engagement and sense of purpose in Year 10 and Year 11 Geography and therefore raise the attainment of students who achieved 4c and 4b at KS2?

Action:

A range of engaging activities were trialled over the course of the spring term. Music starters with a theme linked to the learning were trialled. We also tried to think about how the resources we used could be more engaging and enable students to better access the curriculum. We tried to include more work based around real world relevant examples in lessons to try to get those students who are on more vocational routes starting work more quickly and engaging with the content.

**Findings:**

There was some improvement in the behaviour of students and when students engage with the activities provided, they do well and are successful. This has been quite dependent on the mood of the individuals when they come into the room, which is something we need to think about next time. Steady creeping up of grades over the year, but too early to tell which cause has brought about which effect.

Next Steps:

Consider how we can mitigate for individuals' changeable moods and behaviours. Delivering the more exciting content earlier in Year 9B to get them into the subject quickly and stop any students slipping away before we've started.

Members:

Lisa Coulson, Andy Chalkley and Thomas Rowell (Geography)

“Reducing the barriers for boys who are reluctant writers”

Issue

Students struggling to develop literacy skills to describe, explain and evaluate practical activities.

Conclusion

The resources enabled students to develop effective, resourceful and independent learning skills. Students quickly became confident in using connectives and keywords to meet the assessment criteria.

Lesson Study Highlight:
Department members have planned the lesson collaboratively

Audience:

Teachers/departments interested in supporting students to become more engaged, confident in writing and use learning mats to access assessment criteria.

Research question:

To what extent can boys writing be improved by use of differentiated literacy - focused learning mats?

Action:

After working collaboratively, we created a range of differentiated (Pass, Merit and Distinction) resources that identified the appropriate keywords, and linked them to specific assessment criteria.

Findings:

Students became much more engaged and confident to complete tasks using required terminology. The level of work completed is of a higher standard and creates more opportunity for constructive peer assessment.

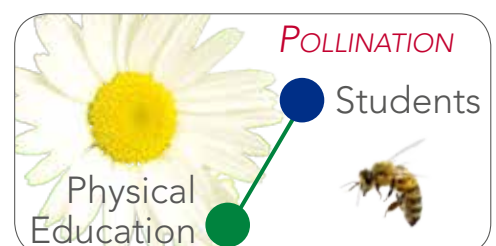


Next Steps:

Use same framework for different units to offer more consistent scaffolding and differentiation for students.

Members:

Oliver Daniels, Charlotte Davies, Paul Henwood and Richard Candlin (Physical Education)



“Engaging disengaged mid PA boys in group work in science”

Issue

Boys, particularly mid PA boys, in this particular class were not getting actively involved in group work in science - and were missing out on opportunities to develop and extend their learning.

Conclusion

The engagement of mid PA boys was significantly improved by using specific, named, roles to structure the group work with clear individual responsibilities for the group task. Individual 'Name' and 'Role' badges for students were particularly effective!

Lesson Study Highlight:

Case students have been identified and their responses to the planned activities are anticipated and observed

Audience:

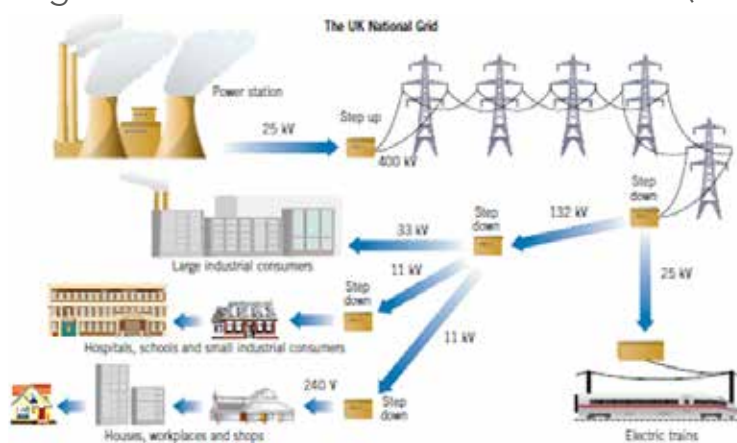
Anyone interested in improving group work.

Research question:

To what extent can planning a group work lesson around named roles and responsibilities improve the engagement of mid PA boys in a challenging group?

Action:

Planning collaboratively we researched and found a 10 minute video that explored the issues of surviving without electricity. We created a task outcome for each group to collate and analyse information (from information stations) to draw justified conclusions about how to cope without fossil fuelled sources of electricity. The groups were constructed on the knowledge of the characteristics of the students (not just the case students) - to provide a mix in each group and with roles identified for each student based on this knowledge. Each role was specified in terms of the information that they needed to collate and the overall contribution to the group task (using mini white boards to collect information).



Findings:

- Using video as the stimulus material effectively engaged students.
- Groups constructed around the learning characteristics of each individual student in the class proved effective in engaging the disengaged.
- Giving each role a specific name, with its own name badge actively engaged the students (including case students). They spoke positively about the structure of this lesson and the impact it had on their learning.

Next Steps:

- Provide the examination questions to the group at the start of the activity. Company secretary have the task to start to link feedback to the question.
- The groups (at least some) would have benefitted from having a template to guide the collation of their separate information.
- Limit the number of words or do not use wowo boards, and students bring back what they understand and then focus on what they need from their next visit.
- Individual members complete the exam question to measure their individual engagement in the learning.

Members

Marian Mulcahy, Steve McReynolds, Dave Goode and Sophie Hargreaves (Science)

“Improving literacy skills to enhance the quality and effectiveness of MRI”

Issue

Students being disengaged with MRI tasks and not recognising what they need to do to improve their work.

Conclusion

Students who were paired up with others who made the same or similar mistakes in their work were able to take greater ownership of their learning. Also, spending more time on MRI tasks allowed students to gain a better understanding of how they were going to improve their work to achieve higher marks.

Lesson Study Highlight:
Department members have planned the lesson collaboratively

Audience:

Teachers looking to improve mid performing students (Year 12) coursework assessed unit.

Research question:

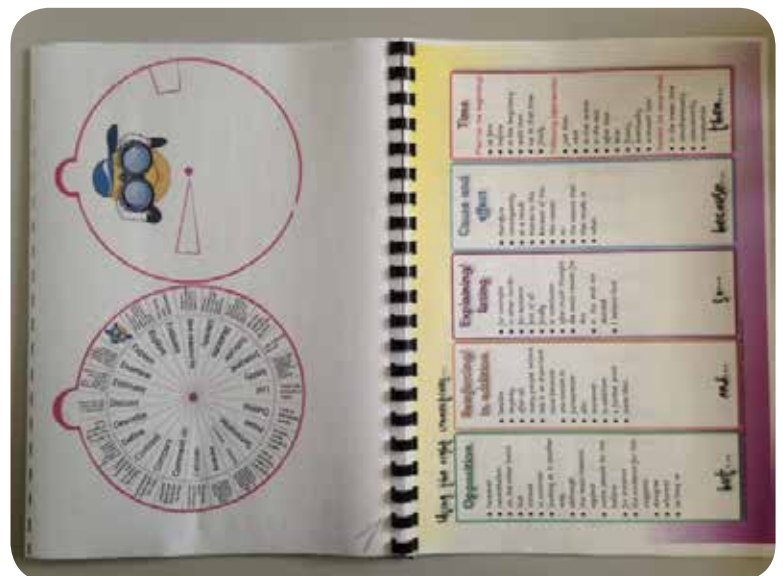
To what extent can 'fix-it' time in lesson improve the quality of coursework being produced, paying particular focus on literacy skills?

Action:

Students handed in a draft of their coursework and from this their teacher marked it basing all written feedback around the idea of 'shapes'. Students received two shapes, one for their WWW and the other for the EBI comments. Students of the same ability were paired up and worked collaboratively using the 'fix-it' kit, a toolbox of resources we created, to complete an improved MRI.

Next Steps:

Continue to plan more focused time in lesson on MRI and look at implementing something similar in our examined units.



Members:

Kim Blessing, Katrina Chamberlain and Karen Dear (Health & Social Care)



“Space’ to revise”

Issue

Revision can be overwhelming and, quite frankly, boring. After the practical exams, we found that students were struggling to maintain concentration and enthusiasm for revision for a whole hour.

Conclusion

Initial findings suggested that it worked best when the new knowledge inputted wasn't too much all in one go.

Lesson Study Highlight:
Members have read previous research literature to inform planning

Audience:

Any subjects developing exam revision lessons.

Research question:

To what extent can spaced-learning improve revision outcomes in Year 11 girls.

Action:

We adopted the spaced learning approach to some revision lessons by going over key facts; names of collaborators, dates and starting points. They were given the info in a powerpoint in the first input, followed by a ten minute break making play-dough animals. The second input repeated the powerpoint, but this time with gaps in the information that they had to fill in followed by a second break - another play-dough animal. In the third input, they had to demonstrate the knowledge by answering exam style questions.



http://www.innovationunit.org/sites/default/files/Spaced_Learning-downloadable_1.pdf

Findings:

In the original research, Bradley and Patton (2011) reported that students said, "For me, Spaced Learning is a bit like my climbing. I don't try to learn; I don't write anything down, and I don't review. It just seems as if I am seeing a movie in my mind that I have already seen before, and my understanding of the information presented becomes more precise - clearer - when I see it again. During the breaks, I focus on the instructions for the physical activity. In the end, I am left with a movie in my head of the lesson, just like my memory of a climb." (Bradley & Patton, 2011).

Although we found an element of this, there are still some areas we wish to work on. As suggested, we found that too much information given all at once was hard to take in, in the 12 minute input slot, but students really enjoyed trying something new.

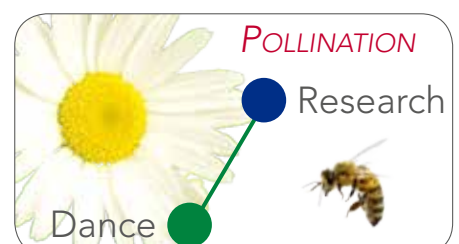
Next Steps:

We are going to try out this process again but explain fully to students how and why this works. Less information given in the first input as I feel I overloaded them with info in the first 12 minute input.

Vary the break tasks to something other than play-dough!

Members:

Liz Major and Anna Burnham (Dance)



“How do I get students to keep track of the feedback I give during coursework?”

Issue

Providing appropriate feedback and guidance on design coursework portfolios that meet both the school marking policy to show progress and the exam board specification.

Conclusion

The students have become more aware of how the marking criterion relates to each page of their coursework and are responding well to this.

Lesson Study Highlight:
Feedback from students about the lesson has been gathered and used in the review

Audience:

Any classes where students complete large scale projects or coursework.

Research question:

To what extent can the feedback be focused so that 'fix-it' time is used to improve the students' work?

Action:

Design an individual A3 sheet that fits at the start of each marking criterion, the sheet incorporates the mark criterion, WWW, EBI, MRI and basic requirement as well as feedback for the section. There should possibly be a section, using a RAG coding which are used to track and show progress.

Engineering: Investigating the Design Context		Unit 2	EBI:
Name: _____	Room: _____	Group: _____	
<input type="checkbox"/> Concept & Brief Analysis <input type="checkbox"/> Research Plan and shop visit <input type="checkbox"/> Primary Product Analysis <input type="checkbox"/> Secondary Product Analysis <input type="checkbox"/> Material Research <input type="checkbox"/> Specific Research <input type="checkbox"/> Client /user requirements <input type="checkbox"/> Product Specification	<input type="checkbox"/> 4 + design ideas <input type="checkbox"/> Ideas compared to specification <input type="checkbox"/> Modelling of ideas <input type="checkbox"/> Designs developed and modified <input type="checkbox"/> Research is documented.		
WWW:			MRI:
When Designing- unit 2			Signed:
5	Produced a detailed analysis explaining the client's requirements and justifying the key features.		EBI:
4			
3	Produced a more detailed analysis, identifying most of the key features and client requirements.		
2			
1	Produced a brief analysis, identifying some features of the design brief, to produce a design specification.		
0			
9	Generated and evaluated a range of alternative design ideas. There is detailed evidence of testing and modifications to produce a final design solution.		MRI:
8			
7	Generated and evaluated alternative design ideas with evidence of testing and modifications to produce a final design solution.		
6			
5	Generated and evaluated a basic design idea and developed a simple design solution. There is some sign of modification.		Signed:
4			Target Grade
3			Final Mark
2			Final Mark
1			
0			
Provisional Mark	Assessed By:	Changes:	Final Mark
Provisional Mark	Date:		Final Mark

Findings:

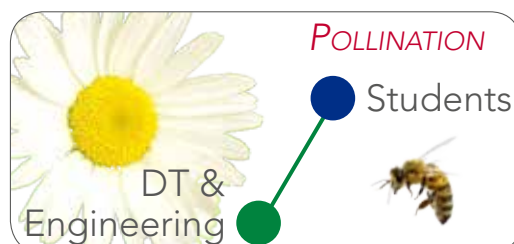
This has worked well but talking to students they found the general feedback difficult to link to specific pages. This was especially evident with the lower ability students. This resulted in more verbal feedback being given.

Next Steps:

The set criterion feedback sheets are to be colour coded to help identify the related marks, feedback given on each page (post it note style) and when completed attached to the front mark criterion sheet these can also be colour coded.

Members:

Adam Billington, Elaine Lucas, Tracey Lund, Chris Chapman, Celia Trenchard and Gill Wilkinson (Design Technology & Engineering)



“Developing literacy and technical language in design”

Issue

Many of the students that take design subjects think that the subject is more practical based and have confidence issues with literacy and incorporating technical language in their work.

Conclusion

Students are generally more engaged and are working more independently. They liked the word cards and became more confident with them, with some students asking to use them for other tasks.

Lesson Study Highlight:
Department members have planned the lesson collaboratively

Audience:

Teachers of Year 9, 10 & 11 classes who are interested in developing students' literacy and technical language, in relation to evaluation and analysis tasks.

Research question:

Can students develop their analysis and evaluation skills by the use of key word cards and learning mats?

Action:

- Identification of key tasks that were used across the Design Technology & Engineering course specifications.
- Identify key words used to help analysis, synthesis and evaluation. Sentence prompts that can be given to develop thinking and structure.
- Construct a range of differentiated student friendly resources that are designed to aid set structured tasks.
- Use resources in lessons and assess.

Findings:

The larger place mats have a large amount of information that can be used for tasks that continue over several lessons. Students were given the mats and key word/sentence starter cards to use. These were a good resource for the higher ability students especially during coursework, but were seen as confusing and 'too much' by the lower ability students who just gave up on them.



The key words/sentence starter sheets seem to be producing some interesting results, the lower ability are quicker to start the tasks and although the sentences are still simple, some students are using the spelling sheets as a check list to help evaluate (it seems to have given the lower ability students a criterion to evaluate against). There is a significant improvement in the subject specific spelling that is increasing the quality of the evaluation.

Next Steps:

The learning mats need to be restructured for lower ability students, possibly breaking them down into even smaller parts. We could also set up more word banks or get students to create their own personal mats with sentence starters.

Members:

Adam Billington, Elaine Lucas, Tracey Lund, Chris Chapman, Celia Trenchard and Gill Wilkinson (Design Technology & Engineering)

“Preparing students for theory exams”

Issue

Year 13 Textile students felt unprepared for exams, having failed the previous year's paper, and wanted more theory lessons in their scheme of learning.

Conclusion

After discussing initial issues with Year 13 students and the Head of Art, whilst adequate theory had been provided, students needed to develop their revision techniques to perform more successfully in exams.

Lesson Study Highlight:
Feedback from students about how to develop the lesson study was gathered before starting

Audience:

Any teachers looking to improve the quality of structuring higher mark answers.

Research Question:

To what extent can theory lessons incorporating different resources raise the achievement and pass level of Year 13 students?

Action:

Students were interviewed for their perspective and understanding of what they felt the issue was. The interview was discussed within the triad and theory lessons were developed on the findings. Students had been given a bound booklet, with all the AQA relevant theory covered at A Level, for revision. When practising past exam questions, we established that lack of revision was a big part of the issue; with structure, grammar and subject specific language all lacking. Introducing more class time spent on theory content in terms of their AQA booklet being tied to relevant videos, exam questions, develop own revision content, subject specific keywords and dictionary/glossary sites, useful websites to browse, 'Show My Homework' with extended dates so content was readily available and open book marking using AQA previous papers.



Findings:

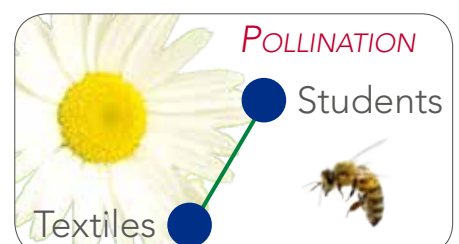
Students felt better prepared for their exams although their results will dictate overall impact. It was interesting marrying up exam questions, mark sheets and the AQA content. Year 12 students were also getting similar theory classes as they shared one class with the Year 13 students, so they felt better prepared too.

Next Steps:

Continue to use the AQA content booklet as it's a very good basis for students to work from. Link videos and exam questions to booklet and make available across the department.

Members:

Anna Williamson and Cheryl Burgoyne (Art & Textiles)



“Focus, boys, focus!”

Issue

High ability boys lacking self-motivation in a large piece (10 hours) of controlled assessment.

Conclusion

Giving students the opportunity to gradually complete each part of the controlled assessment is beneficial. Students felt they were making better use of their time by ‘chipping away’ at the work. Students also said it was less overwhelming.

Lesson Study Highlight:

Case students have been identified and their responses to the planned activities are anticipated and observed

Audience:

Teachers of high ability but passive boys.

Research question:

To what extent can 'chunking' have an impact on overall attainment in a long-term controlled assessment?

Action:

'Chunking' is a way of splitting a lesson into smaller sections. Mini lessons were designed around the two case students' weaknesses, and focussed on what students needed to do to gain the top band of marks. It is important to note that these tasks were designed to support students in managing the work load of a large project, rather than directly improving the quality of the work. It is clear that the students could demonstrate the elements of a top band response, but planning to achieve this was an issue:

- 1) 5 minute input on a small group basis connected with top band of marking criteria. Students opted into this depending on the stage of their controlled assessment. Case students were told they **MUST** be involved.
- 2) Students analysed full mark examples and wrote themselves instructions to take back.
- 3) Teacher provided short tasks to address their misconceptions.
- 4) Applied to their own work.

Findings:

- Students were seen to be engaged in every step of the task.
 - Case students were able to identify what they needed to do specifically to move up a band.
 - One student improved their work by one band.
 - One student improved their work by two bands.
- Students said they liked the structure of the lesson.



Next Steps:

Remove the teacher input element. Teacher set up more 'stalls' for students to access independently which we hope will encourage students in taking ownership of their own work. These could be placed in the middle of the room so students can identify what they need to do on an individual basis.

Members:

Charlotte Tabert, Hannah Meadows and Clare Hood (Music)

“Promoting engagement and motivation in revision sessions”

Issue

Year 11 Science for most students is revision of material covered in Years 9 & 10 so, students can become demotivated and bored when revisiting old content.

Conclusion

The students appreciated the structure of the lessons and remained engaged throughout a double lesson. By providing differentiated and varied tasks covering the topic, all students made some progress in the lessons. All students were clear on the standard and detail expected of them for this topic.

Lesson Study Highlight:
Department members have planned the lesson collaboratively

Audience:

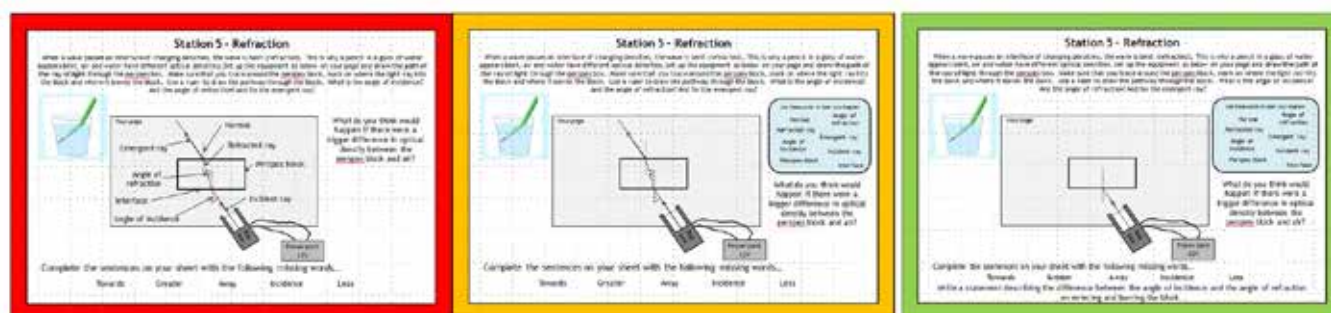
Any teacher needing to revise a short topic made up of discrete sections.

Research Question:

To what extent can motivation and engagement be promoted in Year 11 revision lessons through the use of activity stations?

Action:

Two lessons were created to revise the 'Waves' topic in Physics 1. The topic was divided into eight discrete sections, eight differentiated and varied activities were created (including practicals, text book research, exam style questions and computer simulations) and were set up at eight stations in the classroom. The students spent about 12 minutes at each station and completed a doublesided A3 proforma based on the differentiated instructions they found there. A further lesson was then used to peer assess the output and correct any mistakes.



Findings:

The lessons were very well received by the students, with them feeling excited and still discussing what they had done after the lesson. The students enjoyed working independently but said they needed more time at each station. The time pressure meant that some students copied content rather than questioned areas of weakness. Whilst scaffolding was available at each step, some of the less motivated students immediately went for the red (easy) option. The set-up of the room took a long time. It was challenging managing all of the stations, however after a couple of station options the students were soon managing themselves. It was good to revisit the topics after the main event to mop up any misconceptions.

Next Steps:

One of the activities was not very popular (keyword definitions), I would change this next time. In order to overcome the default easiest option, an English teacher suggested a points score according to difficulty with a reward idea to encourage, stretch and challenge when selecting the activity level. Each activity was able to be extended to the next level up, so this could work well.

Members:

Jo Haigh, Emily Adams and Jack Downes (Science)

“Getting A Level students to improve their extended writing using MRI and ‘fix-it’ time”

Issue

Unit 4 students were struggling with the format and understanding of extended writing tasks.

Conclusion

Some students have been able to use the writing frames and support grid/materials to improve their writing skills. However, more familiarity with these new formats are needed in order for it to become embedded.

Lesson Study Highlight:
Department members have planned the lesson collaboratively

Audience:

Anyone interested in developing extended writing using MRI.

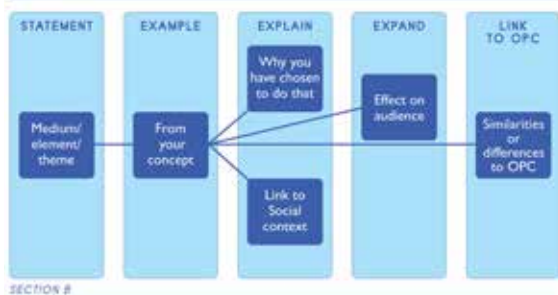
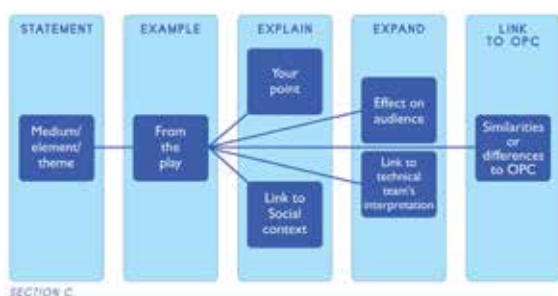
Research question:

To what extent can the use of writing frames and 'fix-it' time in lessons improve the progress of A2 students in the Unit 4 extended writing tasks?

Action:

Students were given a writing frame to use in Section B and Section C. We worked on a grid that could be used to support the students in Section A. We created written examples to support students understanding and then used different colours to support understanding and differentiate the different areas of the writing frames.

	ALL	MOST	SOME
0-3 Marks	4 Marks	5-6 Marks	7-10 Marks
Describe what happens in the extract.	Outline what the actors need to understand about the scene, address the question and back up with evidence from the play (quote).	Outline what needs to be presented in the final performance.	Outline the significance of this moment in relation to the play as a whole and how it will affect the ensemble/audience.
Write about just one activity, for example, hotseating to get the actor to understand how the character thinks and feels. Just one activity can make this biased to one activity or character.	Outline what you would get your actor/s to do and why, for example, hotseating to get the actor to understand how the character thinks and feels.	Explain what this exploration might look like in the rehearsal.	Explain what this exploration might look like in the rehearsal and how these will affect/deepen/enhance their understanding of the role or moment in preparation for performance.
There is little sense of how this will help an actor or cast prepare, which shows little knowledge of the play. There are no reasons given about how this will help the actor or casts understanding.	Outline how this will help the actor/s when they have to perform the extract, for example, what it will tell them about movement, speech, physicality or proxemics.	Outline how doing this activity could benefit the cast involved with the moment/s.	Outline how doing this activity could benefit the cast involved with the moment/s, audience and presentation of performance style.
The activities chosen do not fit what they actors might need to explore, in a strange order and do not cover all of voice, proxemics and movement.	Then build on this adding another 2 activities using the same structure and make sure you cover voice, movement and physicality.	Always justify why you will do the next explorative task by outlining what the actor/s still need to understand about the moment/s.	Justify why it was important that this task was done in this order. There will be a clear sense of a progressive rehearsal that flows. It will make sense to an examiner as to why you organised your rehearsal in this way.

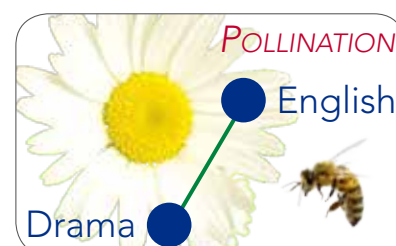


Findings:

The writing frames were developed originally from the English Department's SQEEL writing frame.

Next Steps:

We want to turn the resource into a feedback tool to support students in the future. We will continue to use the revised frames and sheets with the students from Year 12 and look at what improvements could be made. The grid needs to be further differentiated as it became confusing for some of the weaker students in the cohort.



Members:

Nicola Kelly and Mark Gibbs (Drama)

“Using writing frames to improve written analysis”

Issue

Students find it difficult to bridge the gap between an excellent verbal response to texts and the challenge of expressing their argument in writing.

Conclusion

Students in Year 10 were able to use the writing frame, depending on their level of need, leaving them free to express their opinions on challenging concepts more confidently.

Lesson Study Highlight:

Case students have been identified and their responses to the planned activities are anticipated and observed

Audience:

Teachers of subjects for whom extended analytical writing is crucial to success.

Research Question:

To what extent would a tiered writing frame allow all students to extend their written analysis, both in terms of quality and quantity?

Action:

In preparation for an upcoming controlled assessment, students were given a writing frame which could be used to construct a written response as a set of 'building blocks' to answer a practice question. Over subsequent lessons, the writing frame's prominence in the lesson was embedded and then slowly removed to promote the transition from student dependence to independence - ready for the final controlled assessment, which the students completed by themselves.

Writing Frame:

Topic Sentence	It is clear that... It is evident that... The text reveals that...
Evidence	This can be seen when... Evidence supporting this view... This argument is supported by...
Explain Your Evidence	The suggestion is that... This implies that... This evidence indicates...
Make wider connections	This is reflected in other parts of the text... Furthermore... This is mirrored in the text when...
Offer alternative interpretations	However... Alternatively... An oppositional approach to the argument might suggest...
Analyse language choices	The writer's use of... The reader is led to think of... The language choice is effective because...

Findings:

Some students responded better than others to the rigid structure of a step-by-step writing frame. Whilst lower ability students, and boys in particular, responded positively to an almost 'checklist-like' approach, higher ability students were perhaps constricted by the system.

Next Steps:

How can a writing frame, or writing guidance, be implemented that doesn't limit our highest ability students?

Members:

Dave Hetherington, Hannah Smith and Michele Smith (English)

“Getting middle set students engaged in MRI”

Issue

Middle ability students are often disengaged when correcting work that has been assessed and it is hard to help students with different problems all at the same time.

Conclusion

Some students were able to follow the examples to help improve their understanding but more familiarity with this style of learning needs to take place for students to demonstrate improved progress.

Lesson Study Highlight:
Feedback from students about the lesson has been gathered and now used in the review

Audience:

Teachers of middle ability disengaged students who want to engage in MRI.

Research question:

To what extent can STARR marking and 'fix-it' time in lessons improve the progress of middle set students?

Action:

Students were given individualised worksheets based on previously marked work. Worksheets included worked examples and graduated exercises up to exam style questions to develop independent learners.

MRI
"Difficult" middle classes – Making STARR effective for them

Issues	Strategies to Try
<ul style="list-style-type: none"> • Homework not completed either on time or to a decent quality • Students don't like revisiting topics • Students don't cope very well with correcting work. • Students not coping with "remembering" bit meaning anything • Students recall of learning 	<ul style="list-style-type: none"> • Use some classwork to assess for STARR • Assess on a single TOPIC (not multi-topic) • Identify key problems • 'Teach' before STARR • Exemplar (teaching based on markscheme)

First Meeting

STUDENT FEEDBACK - GOOD POINTS:
The example on the sheet and the differentiated questions

Class Action/Remember Sheets after a class test on fractions

To be able to find the fraction of amounts.

Example: 3/4 of 20 = 15

Exercise: 2/3 of 30 = 20

To be able to change percentages into fractions.

Example: 25% = 1/4

Exercise: 75% = 3/4

To be able to explain why a fraction can/can't be simplified

Can't be simplified	Can be simplified
Numerator and Denominator have no common factors	Numerator and Denominator are both
4/7	6/12
11/22	10/20
15/25	18/24

1. Fill in the missing words in the table above and then write the following fractions into the appropriate column:

4/8 10/20 12/18 15/25 16/32 21/28

2. Explain why 10/20 can be simplified.

Feedback:

GOOD: Pupils liked the example on the sheet and the differentiated questions

TO IMPROVE: pupils like some even harder questions and to finish with an exam question. We felt that the WWW, EBI should be on same sheet as the action/remember points and that it should be attached to original work to help with distribution

STUDENT FEEDBACK - IMPROVEMENTS
More difficult questions and finish with an exam question.

TEACHER FEEDBACK - IMPROVEMENTS
The WWW, EBI, action and remember should be attached to original work to help with distribution and students linking MRI to assessed work

Links:

STARR marking developed in SWA maths department and structure of worksheets developed from Psychology.

Impact:

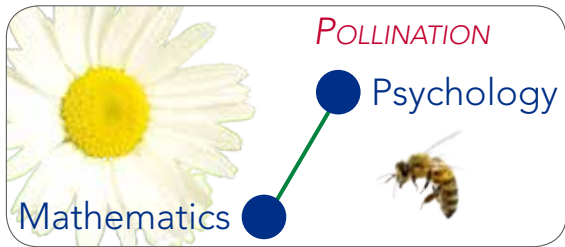
Students need to become more familiar with using the examples to help improve their understanding so impact is still unknown.

Next Steps:

Continue to use the revised STARR marking style sheets with the class on subsequent assessments to determine if familiarity will aid progress.

Members:

Rebecca Nunan, Tim Bartlett and Dave Hall (Mathematics)



“Learning from other people’s mistakes”

Issue

High ability students not achieving top grades because they make ‘silly’ mistakes, on easy questions.

Conclusion

Providing students with completed exam style questions with mistakes that they had to find helped them see the sorts of mistakes they might make and how to avoid them.

This was most effective when students were given questions slightly below their target grades.

Lesson Study Highlight:
Members have read previous research literature to inform planning

Audience:

Any exam class where students can miss marks on easy sections/questions.

Research question:

To what extent can STARR 'fix-it' time, focussed on students spotting mistakes in answers to exam questions, improve student performance in mathematics?

Action:

After reading an article by Erica Melis (Melis, 2004), we decided to provide students with past exam questions and model answers, which contained mistakes that students then had to find.

Findings:

The resources were well received by the vast majority of students. The case students felt the tasks helped them to see the sort of mistakes students make in exams and they believed this would help prevent them from making similar mistakes.

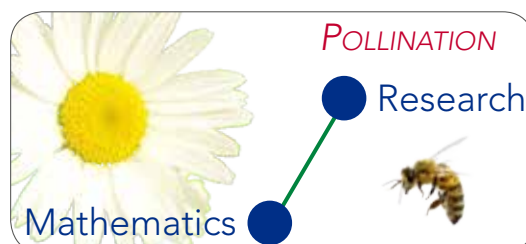
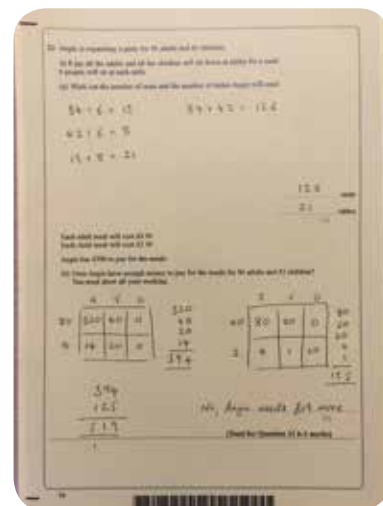
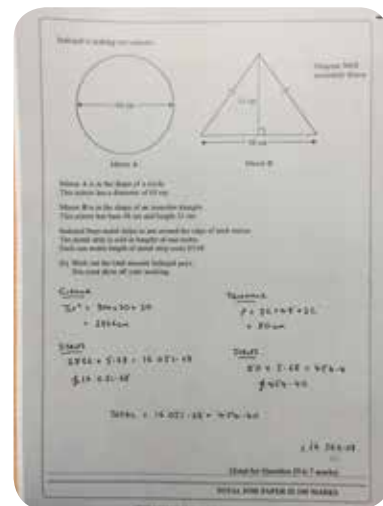
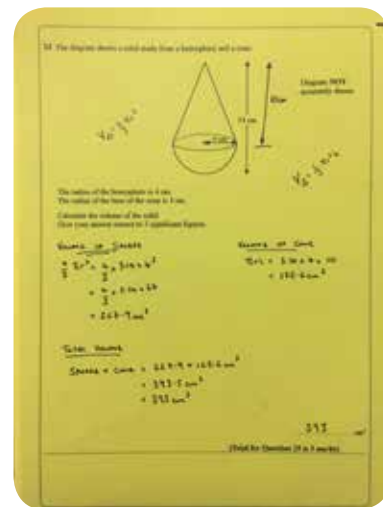
The tasks worked best when students were given questions slightly below their target grades. Giving students questions above their target grades proved less fruitful. The only students who did not see the benefit of the tasks were high ability Aspergers students, who could not see the point of looking at another student's work that contained mistakes and preferred to mark their own work with the answer sheets.

Next Steps:

We plan to develop the idea further to try and establish if certain types of mistakes can be best addressed through this methodology.

Members:

Lyn Minker, Peter Fernandes and Nick Martin (Mathematics)



“Which one do I do?”

Issue

AS Level students struggle to understand key language of Decision Mathematics and complete high mark questions.

Conclusion

The resource enabled students to better understand the priority topics - highlighted by the 'hot' colours, the summary boxes enabling quick and concise revision of all course content. When used regularly, the resource encourages a more systematic approach to applying the correct algorithm.

Lesson Study Highlight:
Feedback from students about the lesson has been gathered and used in the review

Audience:

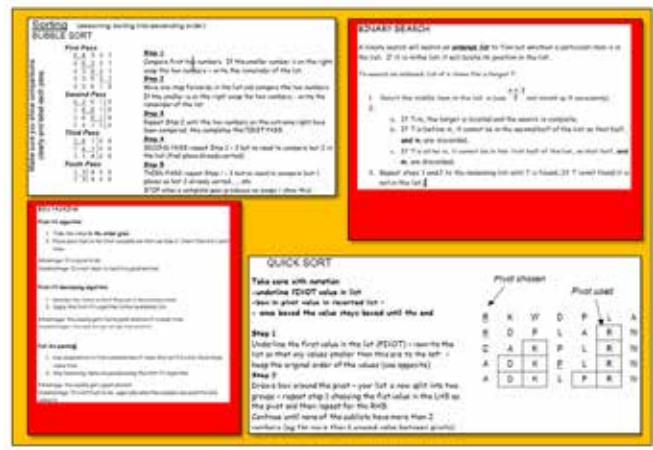
Teachers/Departments interested in supporting students identifying most likely exam topics and breaking down course content to a more manageable size. Helping students to identify key vocabulary, subject specific terminology and apply correct method to solve complex problems.

Research question:

To what extent can a visual summary document improve the understanding of exam questions in Decision 1 module?

Action:

Our triad devised our own resource aimed at supporting our students in answering short and long questions in the Decision 1 exam.



Findings:

On the whole, our students reacted well to the resource. Improvements were suggested, for example, including a glossary, and acted upon to produce the final version. Their class response has been favourable, with the colours especially helping them appreciate the most likely 'big' topics in their Decision 1 exam.

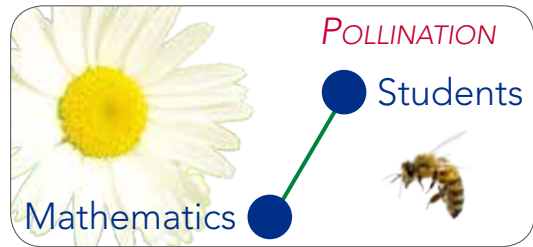
Next Steps:

Producing a similar booklet for the core modules would be an equally useful revision tool for AS and A Level students to enable them to tackle 'big mark' questions in the exam.

		D1 Ch 1 Hw - Algorithms											
		1a	1b	1c	1d	2a	2b	3a	3b	3c			
Student	Overall Average	2	3	4	3	5	4	7	2	1	%	Grade	
A	45	E	2	0	1	1	3	1	7	2	1	58	D
B	41	E	0	0	4	0	2	4	7	0	1	58	D
C	14	U										0	U
D	64	C	2	0	4	1	3	0	7	2	1	65	C
E	29	U	2	0	4	1	0	4	4	0	1	52	D
F	63	C	2	1	4	0	3	1	6	0	0	55	D
G	95	A	2	0	4	0	3	4	7	2	1	74	B
H	50	D	2	0	4	0	1	0	7	2	1	55	D
I	71	B	2	0	0	1	5	0	4	0	0	39	U
J	44	E	2	0	0	1	5	4	5	0	0	55	D
K	64	C	2	0	3	1	5	4	7	1	0	74	B
L	74	B	2	3	4	1	5	4	7	2	1	94	A
M	67	C	0	0	4	1	3	0	4	0	0	39	U
N	76	B	2	1	4	1	4	4	7	2	1	84	A
O	63	C	2	0	4	0	1	0	7	2	1	55	D
P	32	U	2	0	4	1	2	0	4	0	0	42	E
Q	71	B	2	3	4	1	5	4	7	2	1	94	A
R	55	D	2	0	4	0	2	4	5	0	0	55	D
			1.8	0.5	3.3	0.6	3.1	2.2	6	1	0.6		

Members:

Karim Kurji, Charles Ash and Arron Beckett (Mathematics)



“Keeping the pace!”

Issue

Giving students time to respond effectively to their feedback was taking most of the lesson. Doing this on a regular basis creates difficulties in covering the course content.

Conclusion

To improve efficiency, students were given exemplar answers copied from students' homework and then given new questions to answer. Most students found the feedback useful and felt that their understanding of the topics covered improved.

Lesson Study Highlight:
Feedback from students about the lesson has been gathered and used in the review

Audience:

Teachers interested in maximising the impact of MRI time.

Research question:

To what extent can the efficiency and effectiveness of STARR marking and 'fix-it' time in lessons be improved?

Action:

After talking to a group of students we discovered that students would like to use exemplar answers to try and answer similar questions. They also wanted an opportunity to master topics, so all future homeworks kept the same topics with only one new topic added each time.

Findings:

The time students spent on responding to marking was reduced. The students reported that the exemplar answers helped them to see how to answer questions and also helped to build their self-esteem and confidence as they saw their work being used to help others. They also felt that their understanding of certain topics was improving due to the nature of the homework repeating topics.

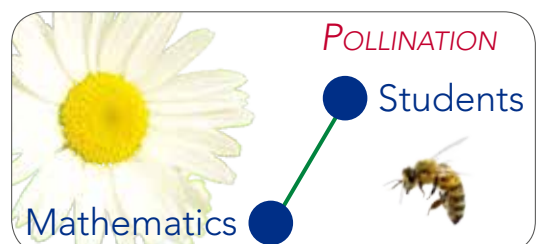
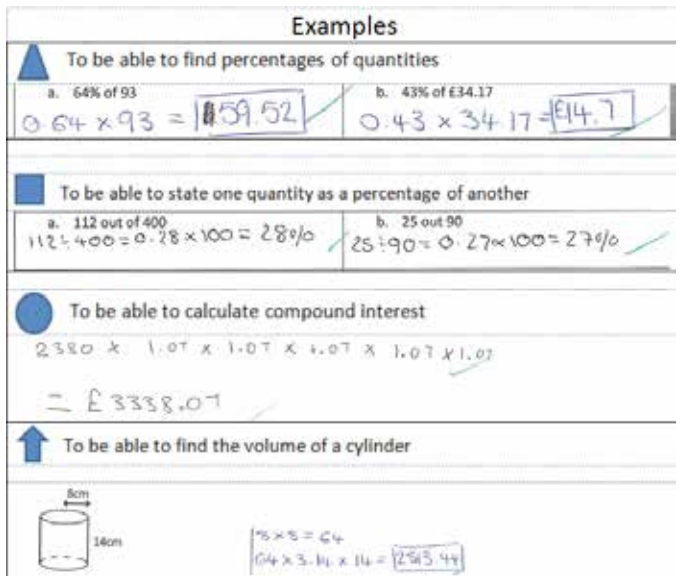
At the request of the students the homework was returned in the middle of the lesson so that they would have something to continue with, if they were waiting for support with their feedback.

Next Steps:

Students not completing homework remains the biggest barrier to effective feedback, so we intend to improve completion rates in the next round of Lesson Study.

Members:

Adrian Steele, Christine Wall and Justin Togher (Mathematics)



“What, how and why?”

Issue

Mid prior attainment students struggling to make progress with extended writing.

Conclusion

It is possible to create a framework (What, how and why?) which supports mid prior attaining students with incorporating technical language and theory in their extended writing. Further work is needed to design schemes of learning where the framework is inherent in all lessons.

Lesson Study Highlight:
Members have read previous research literature to inform planning

Audience:

Anyone who is trying to develop students' extended use of technical language.

Research question:

How can we provide a framework that improves the use of technical language and theory for students with mid prior attainment (4b at KS2) in their extended written answers?

Action:

Initially we developed a writing frame based around Statement, Terminology, Example, Explain, Expound, Link (STEEEL). Lesson Study and marking mock exams showed us that this was too unwieldy and that students' critical thinking was not developed to the level that we needed. The next cycle of development meant that we worked with other departments and from this we developed a new framework based on 'What, how and why?'.



Findings:

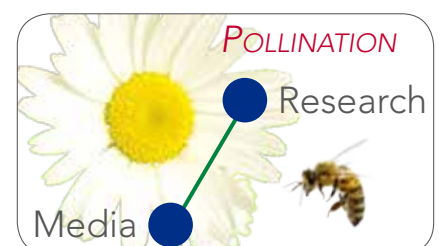
All the mid prior attainment case students made progress, although some more than others. The first framework was unsuccessful but it showed us how students might learn critical understanding more effectively. The new framework differentiated the steps of film analysis in a far more effective manner and has pushed the focus of students to engage in more effective critical thinking and structures their written answers.

Next Steps:

We are currently trying this approach with BTEC students and our third round of Lesson Study has indicated the need for teachers to structure the schemes of learning using the 'What, how, why?' approach.

Members:

Carl Tonking, Jennie Harris and Rob Robson (Media)



“Developing literacy skills to improve extended writing answers”

Issue

Students not structuring their extended answers and not giving explanations to their examples.

Conclusion

Introducing the grid has had a positive impact on students' writing skills by giving them a simple structure to follow, which has improved the structure of their answer. It has allowed them to develop their answers with examples and explanations and also to identify how much to write for each part of the question.

Lesson Study Highlight:
Department members have planned the lesson collaboratively

Audience:

Any teachers looking to improve the structure and quality of higher mark answers by students.

Research Question:

To what extent can the use of writing frames improve the quality of extended answers within A Level Physical Education?

Action:

We created a grid system to help students identify how many marks were available for each part of the question. It also allowed them to structure their answer by using the various parts of the grid to develop their examples.

Findings:

The use of the grid has improved the structure of students' answers and the quality of their writing has improved as they began to use the PEEE format, developed from English, within their planning.

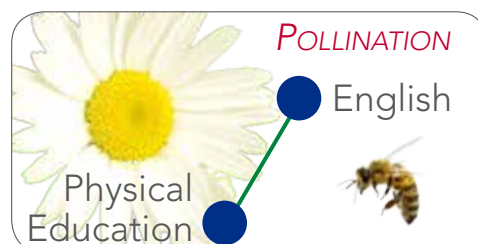
Violence by spectators and players is a contemporary sporting issue. Discuss violence in sport with reference to both causes and solutions. (10 marks, Jan 2009)			
Marks	Key point Green	Explanation- class notes Black	Extended knowledge- book/ mark scheme MRI Purple
2 - both	Frustration - bad result/decision causing violence	feel of unfair decision gets players/spectators worked up	
1/2 player	nature of game, aggression	a lot to play for risk it all/violent to win	
1/2 spectator	promotion hype by media	big attention to close matches, derogatory headlines over losing team	
	overcrowding/facilities alcohol	more chance for confrontation, fewer violent outbreaks	
2 player solutions	tougher deterrents Fines more officials education	less likely to be aggressive/violent if a fine is the consequence more enforcement of the rules NGBs + clubs to teach how play	
2 spectator solutions	reduce alcohol separating fans responsible media	promote family entertainment less rowdy promoting positive attitude	

Next Steps:

Preparing GCSE teachers to develop a similar structure framework for 6 mark answers.

Members:

Helen Sears, Lynda Tailor and Nishi Saran (Physical Education)



“Better use of ‘fix-it’ time with under-performing high PA students”

Issue

High attaining students failing to gain A* in ICT and Computing and changes to the BTEC means that students have less opportunity to re-draft assignments. This highlights the importance of ‘fix-it’ time to help students understand how they will be assessed and make required improvements.

Conclusion

Students developed a deeper understanding of the mark criteria for longer 8 mark questions. Vocational students were able to plan using writing frameworks without the need to redraft.

Lesson Study Highlight:
Department members have planned the lesson collaboratively

Audience:

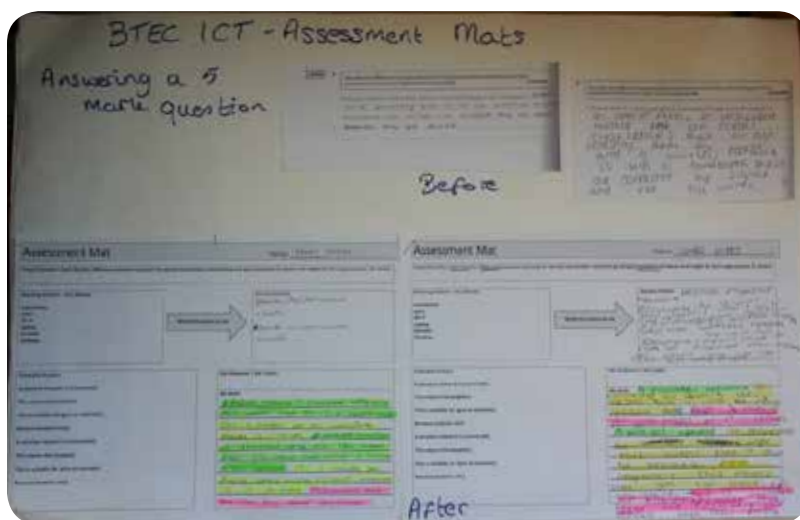
Teachers/departments interested in supporting students in planning assignments through the use of assessment mats.

Research question:

To what extent can the use of assessment mats and specific literacy interventions help support student responses to extended questions and to avoid redrafting?

Action:

We used differentiated assessment mats, exemplar work and support with improving literacy, to help students improve their marks by at least one grade. This also involved the use of writing frameworks designed to meet the assignment criteria without the need for continuous re-drafting.



Findings:

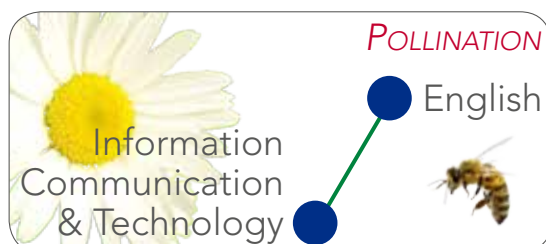
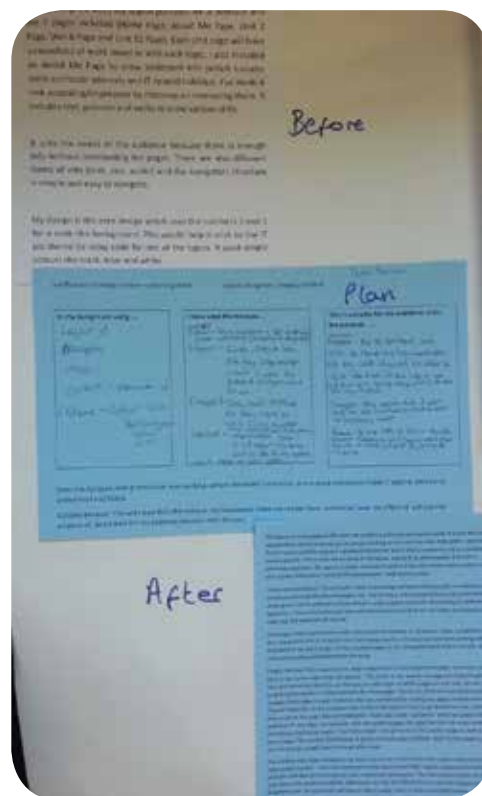
Students were able to develop a deeper understanding of how they are being assessed. As a result, students were able to improve their marks by at least a grade. The use of assessment mats helped students to deconstruct questions in a systematic way and with the support of exemplar answers and writing frameworks, students were better able to identify improvements.

Next Steps:

Investigate and develop differentiated assessment mats for subjects, topic areas and questions.

Members:

Lee Starkey, Beth Kirkman, Ben Clark, Dean Rayner and Stephen Williams (Information Communication & Technology and Computer Science)



“I didn't realise that I had to mention that...”

Issue

Our aim was to help students accurately interpret longer mark exam questions and identify how they would successfully answer them.

Conclusion

Assuming knowledge of command terms caused confusion as some students did not understand them. Lower ability students preferred sentence starters and the more able preferred model answers and points to develop. Having a variety of deconstruction tasks suited the ability range in the classroom. No more than three in a group is the most effective to improve engagement of all.

Lesson Study Highlight:

Case students have been identified and their responses to the planned activities are anticipated and observed

Audience:

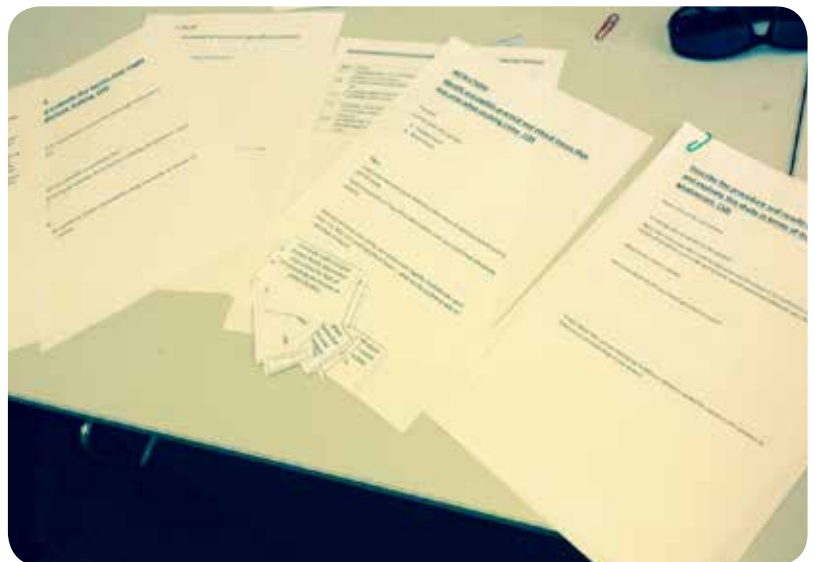
Teachers/departments interested in supporting students in deconstructing exam questions; helping students to select the right information for a range of different questions.

Research Question:

Is there a more successful resource to support the answering of longer answer questions that allows students to select the correct material for their answer?

Action:

In our triad we came up with a range of activities that we had used in our lessons to support the writing of longer answer questions and used these to create four different activities for use in our triad lesson - with the aim of assessing which worked best. Students completed these in groups in a carousel task with each strategy designed for a different question.



Findings:

Different ability students had different preferences. The more able students preferred the model answers and the less able students preferred sentence starters. When completed in four further Psychology lessons following the triad, the same results were found - individual differences in learning styles impacted on what students found helpful.

Next Steps:

Incorporating choice in support materials into our lessons on longer answers both at KS4 and KS5.

Members:

Michelle Orr, Flo Oetgen and Steph Little (Sociology & Psychology)

“I just don't get what the question is asking me to do”

Issue

Mid PA students struggle to achieve more than 2 out of 5 on complex exam questions which require a high level understanding of literacy and semantics.

Conclusion

The resource enabled students to better understand the semantic meaning of the exam questions. When used regularly, the resource encouraged greater depth and detail in students' responses as well as building their confidence when answering the complex, two-tiered 5-mark questions in Sociology.

Lesson Study Highlight:

The lesson is reviewed which includes feedback from students, teacher and observers

Audience:

Teachers/departments interested in supporting students in deconstructing exam questions; helping students to unpick vocabulary and its semantic meaning in order to respond pertinently to complex question styles.

Research question:

To what extent can a graduated literacy resource improve the understanding of exam questions for mid PA students?

Action:

After working with a History teacher and an Art teacher where we made a 'Crown Rules' source deconstruction tool (inspired by a resource used in Art!), the triad devised our own resource aimed at supporting our students in answering 5-mark questions in Sociology.

Findings:

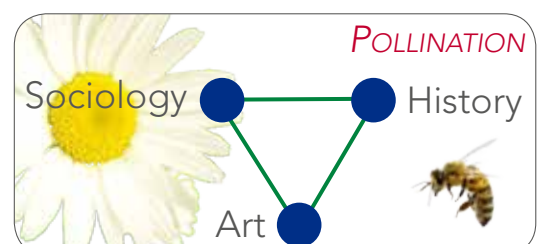
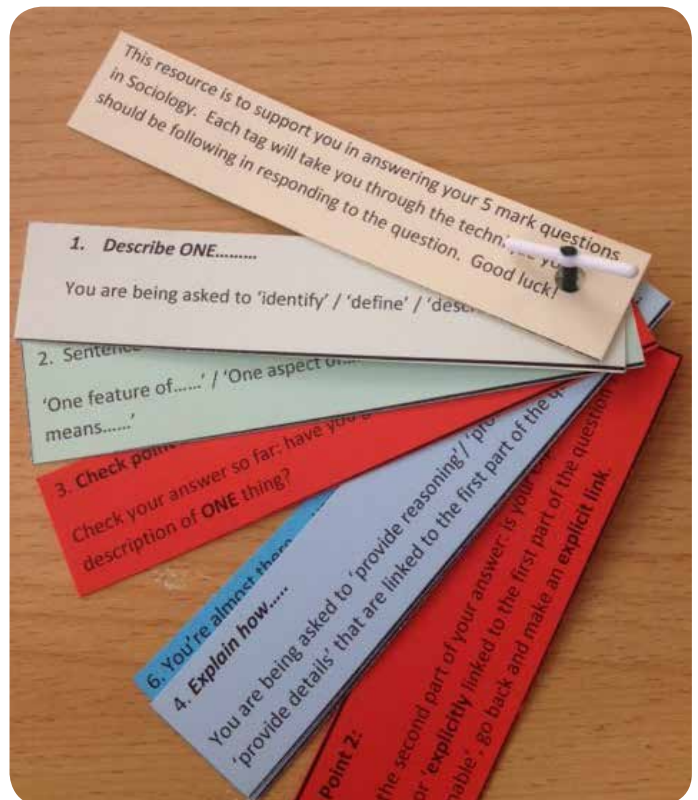
On the whole, our students reacted positively to the resource. On gaining their responses during the lesson and subsequently, they claim it helped them in understanding both what the question is asking of them and how they might approach it.

Next Steps:

Differentiating this resource for high PA students. Researching Dweck's (2008) work to assist us in improving students' mindset when answering exam questions.

Members:

Annette Muckett, Phil Johnson, Lauren Nye and Katie Bridge
(Sociology & Psychology)



“Using MRI strategies to ‘close the gap’ in underperforming students”

Issue

The students, after feedback has been given with clear instructions, do not collaborate with each other during the ‘fix-it’ time to correct their answers.

Conclusion

We have yet to see how they translate these skills in the summer exam but we are hopeful that we have given them the necessary tools to be self-critical.

Lesson Study Highlight:
Seeing the students clearly thinking about how to improve their work and being motivated to do so

Audience

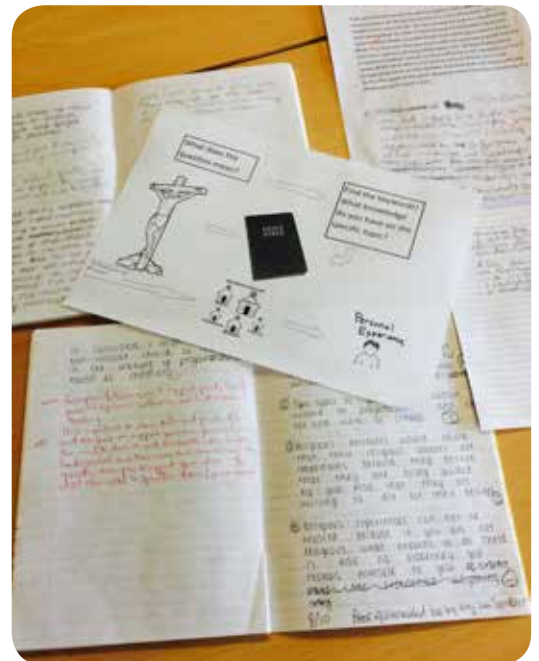
Teachers interested in using feedback to improve performance of underachieving students.

Research Question

To what extent can 'fix-it' time create an environment where students develop a 'growth mindset'?

Action

Our two case students have been stuck on C grades for some time. The reasons for this are twofold. Firstly the quality of their six mark answers (requiring specific religious knowledge and use of exam technique to identify precisely what the question is demanding) has been below average. Their data has them at two grades under their target. Secondly they are both students who have lost confidence and seem to have resigned themselves to underachieving. The focus of our DIP is the development of MRI lessons to ensure all of the Year 11 GCSE students are making at least three levels of progress.



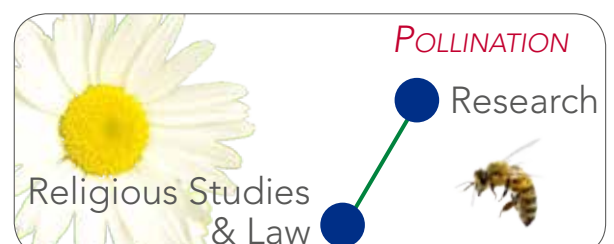
Providing students with summary grade descriptors, examiners reports and mark schemes, we felt that the learners would get used to using these specific materials if they were to connect our specific feedback (the gap identified) and the rationale behind 'closing the gap'. Students follow a simplified, pictorial advice sheet aimed specifically at extending ideas in 6 mark questions. Our final triad lesson featured a 'guess whose feedback' task. This is a way of making sure the students collaborate in using the mark scheme to accurately peer assess and improve their own work.

'The most effective teachers teach backwards. At the heart of teaching backwards is a process that enables teachers to plan and teach backwards from a clear and well defined destination. This was our aim in providing exemplar material and simplified success criteria in our research lesson.'

(Griffith and Burns, 2014)

Members

Rebecca Jackman, Nicola Jones, Sam Tawede and Rob Taylor
(Religious Studies & Law)



“Improving mixed ability students’ understanding and engagement in MRI”

Issue

Making feedback and improvement faster and more effective for all students, especially boys, who are taught in mixed-ability groups.

Conclusion

We improved feedback using icon marking, we also further developed ‘fix-it’ kits which were improved based on student feedback, and were found to be more accessible to the students involved. These improved ‘fix-it’ kits were then found to also lead to a clear improvement in student attainment.

Lesson Study Highlight:
Feedback from students about the lesson has been gathered and used in the review

Audience:

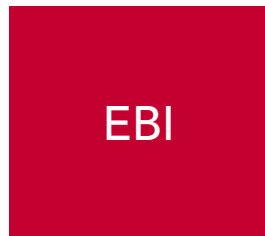
Teachers of mixed-ability exam classes using MRI to improve feedback

Research question:

To what extent can improved feedback and 'fix-it' kits improve students' progress during 'fix-it' time in mixed ability classes?



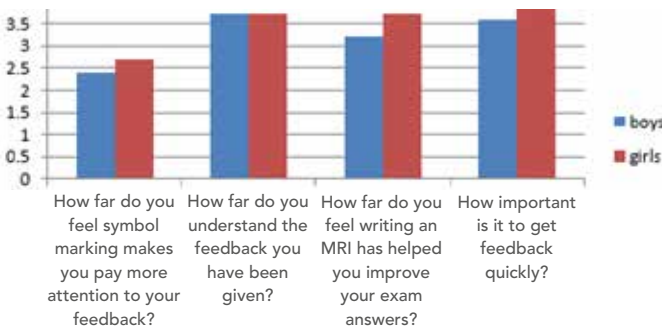
You have **consistently** focused on the question and explained using **good** personal knowledge.



Try to focus on the question even more closely by developing a line of argument through your answer – link to your judgement throughout your answer.

Action:

Students' assessments were marked using symbols. Students wrote their WWW/EBIs from the symbols. They were then grouped according to the type of improvement they needed to make (EBI) and were given a 'fix-it' kit. Teacher input was to help students use their 'fix-it' kits effectively. Students wrote improved versions of their answers. They completed a questionnaire before and after the study.



Findings:

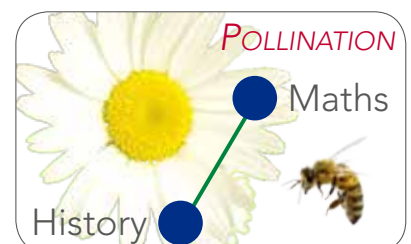
Students reacted positively and were mostly clear on WWW and EBI comments. Most could explain how they were improving their answers. Most were able to use the 'fix-it' kits to make improvements. Student questionnaires demonstrated that students felt the more developed comments and 'fix-it' kits were better in helping them to improve their work.

Next Steps:

Further development of effective comments and a greater range of 'fix-it' kits need to be developed and tested.

Members:

Michael Inns, Paul Barton, Julia Haynes and Matt Connor (History)



“Demonstrating analytical and critical understanding”

Issue

Students were not demonstrating higher level thinking and critical understanding when annotating their work, and therefore not demonstrating analytical and critical understanding' which is worth 20 out of the 80 marks awarded for both coursework and the exam unit.

Conclusion

At A2, students improved their written assignments and annotations beyond superficial analysis. A lesson or series of lessons needs to be implemented in the SOL to help improve students' understanding of AO1.

Lesson Study Highlight:
Department members have planned the lesson collaboratively

Audience:

Teachers encouraging Year 12 and Year 13 AS/A2 Fine Art students to be more reflective.

Research question:

To what extent can contextual studies be improved by using Lesson Study to develop students critical understanding?

Action:

Using LS we developed lessons specific to contextual studies and the importance of AO1. A powerpoint was developed to explain the creative cycle process and creation of an Art vocabulary list.

Findings:

Students needed to improve how they annotated their work. Analysis needed not only to be evident in their work through the written comments that they made, it had to be evident visually in the decisions that they take with their work. It should be seen through the compositions that they choose, media choices that they make, mood created and techniques that they are exploring - they should be able to show a clear link to their theme, inspiration and artists that they are looking at.

At A2 students improved their written assignments and annotations beyond superficial analysis.

Next Steps:

Building lessons into SOL earlier in the course. Also as it was successful at KS5, looking at developing contextual studies at GCSE.

Members:

Jane Redcliffe, Jane Upstone, Sally Mills and Cheryl Burgoyne (Art)



Having looked at the 4 areas mentioned when studying an artist's work the most important thing to ask yourself is:

What have I learnt from the MOOD, CONTENT, FORM or PROCESS that will ***help me*** in my work ***to develop*** the ***ideas that I have?***

“Engaging the recalcitrant girl” Issue

English classes with low ability female students experiencing common problems such as: frequently off task, rushed work, conflict and content to underachieve.

Conclusion

Developing trust between students and teachers was improved through lessons being designed to build a better dynamic, with students being encouraged to participate by working with friends. More risk and student participation was evident through the variety and lengths of tasks. The carousel was more effective at meeting learning outcomes and smaller word counts for summaries promoted deeper thinking about vocabulary and was an effective test of conscious lexical crafting.

Lesson Study Highlight:
Members have read previous research literature to inform planning

Audience:

Teachers interested in Dweck (2008) 'Fixed Mindset' notion that in the face of difficulty the student gives up, declines support, guesses.

COMMENTS FROM OUR STUDENT INTERVIEWS

- Words look flat on the page...
- Don't like speaking up...
- Don't want to be laughed at...
- Like working in groups...
- Too many words...

Research Question:

To what extent can a range of research based activities improve levels of engagement in low performing girls?

Action:

After reading research conducted by Flutter & Rudduck (2004), we tried a number of different activities...

Create six tableaux for key events in the first three chapters

Draw a picture of Lennie and surround your picture with quotations to explain it

Use only three words to describe Curley's wife.

Draw a storyboard of no more than 7 scenes for the plot so far.

OMAM in a minute. Create the fastest drama in the West!

Put the last two paragraphs into your own words using 10 words or fewer

Complete the table showing the significance of key symbols

Findings:

The Carousel

Students felt that practical work not only helped them to understand difficult concepts, but also engendered a sense of achievement, especially when there was a tangible 'end product'.

The Numbers Game

Fast, quantifiable questions designed to synthesise and summarise feeling that the work they were doing was interesting and pitched at a level they felt comfortable with, yet also challenged by.

Promoting Group Confidence

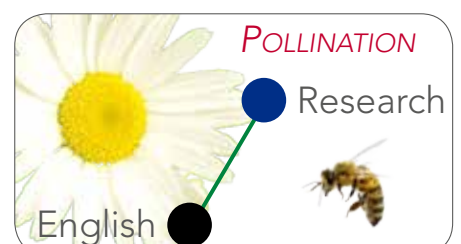
The last test we tried was to introduce 'picnic time': a 20 minute period of a two hour lesson in which we bring and eat cake, but also engender feelings of group trust and cohesion by chatting about topics of interest to them.



Even the more confident learners seemed to need reassurance that they were making good progress on a regular basis; having opportunities to make choices in the classroom. Students reported that their friendships were an important means of support - particularly for students experiencing difficulties with their learning.

Members:

Sonia Kerridge, Nicola Marvell and Sally Baki (English)



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Glossary

A2 - The second component of an A level qualification.

Action research - A form of research that is cyclical, where each cycle informs the development of the research. The action is planned for, acted on and then reviewed

A Level - Advanced Level qualification

ALS - Academy Lesson Study (See page 6)

Anthecology - The study of pollination (See page 4)

AO - Assessment Objective

AQA - Assessment and Qualifications Alliance, an awarding body in England

AS - Advanced subsidiary level, the first component of an A level qualification.

BTEC - Business and Technology Education Council - a qualification

CPD - Continued Professional Development (See page 7)

DIP - Department Improvement Plan

DLS - Department Lesson Study (See page 6)

EBI - Even Better If - a statement which is used when giving students feedback

'Fix-it' time - A period in the lesson when students respond to feedback

GCSE - General Certificate of Secondary Education qualification

KS4 - Key Stage 4

KS5 - Key Stage 5

LLS - Laser Lesson Study (See page 7)

Market Place - An event where members of staff share, display and discuss their Lesson Study research

MCO - Multiple Choice Question

MRI - My Response Is - a statement which is used when giving students feedback

PA - Prior Attainment

PEEE - Point, Example, Explain, Effect - a mnemonic used to structure written responses

Professional learning community - A community of teachers that share and develop a common professional language and pedagogy

RAG - Red, Amber, Green - a coding system used to determine how well students understand

Research lesson study - Applying action research using the Lesson Study process

SOL - Scheme of Learning

SQEEL - Statement, Quotation, Explain, Expand, Language - a mnemonic used to structure written responses

STARR - Strength, Target, Action, Remember, Response - a system used for MRI

SWA - Samuel Whitbread Academy

Triad - A group of three teachers working collaboratively

WWW - What Went Well - a statement which is used when giving students feedback

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