

Trinity Teaching SPARK

A stylized illustration of a glowing lightbulb with radiating lines, connected by a thick black line to a white speech bubble. The speech bubble contains the text 'Sharing Practice Arising from Research and Knowledge'. The background is green with various white geometric shapes like circles and crosses.

Sharing Practice
Arising from Research
and Knowledge

 Trinity MAT

Igniting the flame within teachers
Volume Three | 2021



Welcome to SPARK

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Welcome to the 2021 edition of the Teaching and Learning Journal: the Trinity Teaching SPARK for the Trinity Multi-Academy Trust.

This edition is a celebration of the dedication and diligence of the teachers across the trust, who strive to promote the quality of teaching in their classrooms. As we are all aware, this year has been particularly challenging for both staff and students. Yet, the trust has maintained its clear focus on high quality provision for our students and the continued development of our teachers, responding to the ever-changing climate of education. This year, we have a supplementary selection of 'Think Pieces' from Trinity Academy Grammar, which involve staff reflecting on their teaching and learning practices since the formation of their academy, and a bonus section from our Trinity Institute of Education.

We are really pleased to have been able to bring this journal together for Volume 3, which is testament to the generosity and hard work of all involved. Whether you read this journal from cover to cover, or simply mull over one or two of the contributions, I hope that it will continue to provide you with inspiration, ideas, and knowledge to inform your practice.

I would like to thank all of our contributors from across the trust for their hard work and dedication in sharing research and findings, which enable all of us to provide the best possible learning experiences for our students.

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Teacher Led Research and Development Studies





LGBTQ+ in schools

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Relationship and Sex Education: Understanding Students' Perspective of the Role of LGBTQ+ Education in Secondary Schools

The 20th Century saw a queer phenomenon disencumber, unreservedly showcasing sexologists, novelists, academics and art industry professionals to openly draw attention to queer (LGBTQ+) rights, same-sex antics and religious antagonisms, resulting in the ignition of activism: Stonewall riots, 1969 (Wimberly, 2015, p.24). The 1960s sexual revolution ignited talks within the education system, voting to cover only the biological aspects of sex education, naturally paying attention to health as a result of the 1980s HIV/Aids pandemic (Sauntson, 2018, p.17). Sauntson (2018) highlights progressive gestures in the 1993 Education Act, where compulsory discussions were to be held in schools, resulting in a Relationship and Sex Education (RSE or PSHE) curriculum in 1996. As a growing percentage of LGBTQ+ students become more apparent, bullying was highlighted as a major concern with eight out of ten students reporting verbal and physical harassment on a daily basis, resulting in social withdrawal, mental well-being depletions and drops in attainment outcomes (Sauntson, 2018, p.21). In 2010, media communications grew,

where renewed LGBTQ+ corporation Stonewall saw disturbingly high figures of young student discrimination, thus provoking the Department for Education (DfE) to act further and promptly in 2014 (Gilbert, 2014, p.49). Currently, the education system is demonstrating significant growth in practice and policy to support queer education, though gaps are prevalent in student recognition of their rightful LGBTQ+ teachings and what is expected to come of RSE curriculum teachings.

This current research consists of an in-depth examination of understanding students' perspectives of the role of LGBTQ+ (queer) education in secondary schools. It is expected that current research will display thematic effects throughout the analysis of two case studies. Focus rests on student character growth, mirroring the current Ofsted inspection framework of personal development (2019, Section 28). Student growth will be based on a school where queer knowledge is very much appreciated, investigating the possible increases in student confidence, student well-being and the development of student values to contribute positively to British society

(Ofsted, 2019, p.11). With this, influences on student character of acceptance of others is hopefully to follow, decreasing discriminatory acts that may affect student well-being and future endeavours.

The chosen methodology of case study one is group discussion, adopted with the intent to observe classroom phenomenon through the aspect of behaviour and ethnographic influence. This will be driven by a 12-student group discussion where three half-hour group discussions will take place over five weeks: one in week one, one in week three and one in week five. The second case study will then take place in week seven, where one-to-one interview questions are to be synthetic from case study one outcomes. The reasoning for all participants to be of equal and numerous LGBTQ+ and disadvantaged religious backgrounds, was to ensure a well-rounded scope of answers. The participants will vary in age, race, background, gender and sexual orientation, where student, staff and parent well-being are the priority due to the personal nature of the study. (Note: case study two was merely to support the first case study.) The research intentions of case study one were to enable student voices to be heard first, providing vital information on student awareness of LGBTQ+ understandings in school. This case study was to seek whether student understandings were existent, safe and visible in their school life, and what is expected of their LGBTQ+ schooling.

The overall result of current research shows an encouraging amount of positive connections to a literature review conducted. A highlight being, when a school takes care of its LGBTQ+ encouragement via Ofsted's framework of a 'culturally developed child,' it can achieve to influence its school and local community to be accepting of others (Ofsted, 2014). Three main themes occurred within the literature that complemented the findings: **values**, complementing empathy, religion and homelife connections; **mental health**, featuring bullying and

self-belief; and **teacher training**, complementing awareness and crime rates. To respect confidentiality, students and staff are protected under participant codes, for an enlarged example, '**Year7Student1**' and '**Teacher2YoungFemale**'. Moreover, all students in case study one were labelled by name and number to provide some structure to the findings, number one being of LGBTQ+ background, number two being opposed.



Values were discovered under many features, highlighting a recurring discussion point: religion. Literature foresaw discrepancies in religious influence over LGBTQ+ teachings within the RSE curriculum, particularly within the primary sector. As case study one supports, both **Yr7Student1** and **Yr11Student2** (Polish disadvantaged backgrounds) demonstrate the struggles they have on student character as religious parental beliefs show influence on their values. However, **Yr7Student1** showed personal boldness alongside their parents, where literature supports this defiance through a generational growth in the sudden ignition of Article 9 (Human Rights Act, 1988). This article reflects Government growth within the Education Act (2010) where children have the right to education, freedom of thought and ethics. **Yr7Student1** showed empathic views toward his father's upset over LGBTQ+ people, however, since the acceptance of secondary school discussions of the queer world, Government encouragement of this subject provided a platform to ask questions, eliminating naivety and discrimination of diverse people. **Yr11Student2** empathises with



Yr7Student1's trouble of being gay and living under a Polish roof, suggesting a sense of pride toward **Yr7Student1**, though never being taught otherwise. Furthermore, values within empathy and homelife explore the hostile environment caused when speaking of parents, linking literature found on parental protests of RSE teaching in schools in Birmingham. **Yr9Student1** speaks of such delight toward personal parental involvement in their LGBTQ+ explorations, telling positive thoughts of school discussions, which gave them encouragement to feel accepted, leading to then explore those conversations with parents. Literature suggests possible hostile homelives toward these conversations, resulting in taking opportunities away from children to ask questions about a whole community of LGBTQ+. Within an empathy section of values, students support literature conversations; **Yr10Student1** describes bullying from persons of an Indian/Pakistani background and **Yr11Student1** talks of the word 'gay' being used as a negative, verbal outburst reaction, emphasising people's ignorance of offensive behaviour. Teachings at an early age could have stopped this from happening; knowing that it is a choice to be discriminatory, but not a choice to be LGBTQ+.



Within the findings section of self-belief and student difficulties, concerns mirrored similarities with the **mental health** literature. Leading with positive care, **Yr8Student1** strikes an invigorating speech of pride, for people to listen

and to not judge life choices; choosing to accept those who don't have choices in being queer. Literature saw the start of the Equality Act in 2010, where Stonewall's Josh Bradlow talked of a 65% decrease in LGBT bullying percentages in response to a 70% increase in queer talking's in 2017 (Bradlow, 2017, p.7). Psychologist Peter Dewitt supported mental health being the heart of child development, where character building is apparent in the acceptance of others, easing anxiety, therefore effecting student attainment (Dewitt, 2012, p.15-18). **Yr12Student1** talks of multiple mental strains: physical bullying, little self-worth, self-isolation and low studying motivations causing 'attainment suffrage,' with Dewitt's study suggesting that this student is in need of care. Though words from a characterful student **Y9Student1** intervene, stating that 'Speak Out' Club has enabled them to embrace their questions, aiding them to help others too. By meeting three, findings had shown significant growth in all students, particularly in most Student2s. Both **Yr9Student2** and **Yr10Student2** showed significant growth in their questions toward the researcher and Student1s' queer backgrounds, expressing acceptance and believing further in themselves to become who they want to be, and let others be who they want to be, no judgement and ask questions to understand, showing an increase in maturity and confidence. **Yr12Student1** bravely speaks further of their physical and verbal bullying, both in and out of school. They speak mainly to highlight feelings around the ignorance of others, where teacher training could have helped further: "people did not listen much in class because they did not feel comfortable with the teacher and how they delivered it in the lesson" (**Yr12Student1**, M1), highlighting the next section: teacher training.

Within the final findings section of awareness, key literature links **teacher training** alongside crime rate reductions. Within the literature provided, discriminatory acts outside of school communities have been growing in the last five years, referencing Birmingham's figure

of 943,414 crime reports and West Midlands' 261,428 in 2018 (Office of National Statistics, 2018); therefore, providing another incentive for the Government to support mandatory teachings of a diversity-driven curriculum for 2020. To reference **Yr12Student1's** physical and emotional pain, they address the uncomfortable situation that students feel when being delivered a lesson of queer knowledge, students being disengaged with teachers pitching knowledge to the incorrect 'audience.' On the subject of RSE lessons becoming mandatory, the DfE stated its support toward the reduction of bullying, wanting to provide opportunities in the practices of adult life, making it age-appropriate whilst promoting moral, cultural and mental growth of children (DfE, 2019). This Government statement counteracts **Yr12Student1's** feelings, stating that the system needs to step up by delivering proper training to those teaching their suggested statement, especially when it is due to become mandatory. **T2YoungF** clarifies that there are resources but not training available in school (Line 15). **T1YoungM** discusses his own experiences yet wanted more in-depth knowledge to teach it right (Line 8). **T2OlderF** discusses that if she had more training, students would feel more comfortable to open up to her and speak out (Line 31). As the literature refers, Educational Psychologist Damian Hinds stresses emphasis when discriminatory issues are discussed, emphasising to prioritise the care and safety of the young students first (Hinds, 2019, p.3). This change could see **Yr12Student1's** personal decrease in physically and mentally discriminatory acts against them, both in and out of school, with the desired effect of discriminatory acts to decrease throughout the country. Within case study two, teacher findings mirrored **Yr11&12Student** concerns, as data showed high amounts of teacher discomfort when asked about LGBTQ+ understandings in school. All teacher interviewees showed good basic knowledge of queer understandings and an open mind, though not enough real

information for students to feel safe to discuss them in class; such anxiety and nerves were shown throughout the interviews with teaching staff, hence the decrease in trust from students to talk about such a sensitive subject. Initial instincts were correct, confirming that there are mutual confusions from both parties over the perception of LGBTQ+ understandings in schools, resulting in teacher training becoming the underlining factor for this progression.

Upon seeing the effects of a five-week process on student character building, personal interest of the researcher would be to consider a longer time frame, allowing for an in-depth analysis of growth in values from graduating secondary school into the local working community. This would be approached by the following of final-year students, graduating into the working community after years of exposed education about diversity awareness, optimistically gaining enough knowledge from both in and out of school life, where it slowly affects community opinions of LGBTQ+ people in their homelife community. A common theme that has been brought up in the current research, although it has been unable to be further analysed, is parental influences. Mentioned by many students in case study one, parental support is also yet to be established. Potential research could be done into the influence of Parental Consultation Evenings on diversity subjects, to encourage discussions at home. This could bring in further knowledge on aspects and views that other schools could attend to.

This research clearly shows improved compassionate student character traits when discussing LGBTQ+ topics in a safe manner, but teachers' ability to educate safely and confidently is in question. The hope for the future should be on the positive effects on local communities, resulting in a possible decrease in both discrimination and household abuse if LGBTQ+ education began from an early age via proper teachings in school.



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Teacher retention – what’s the problem?

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Context

The evidence is overwhelming: teaching blogs (www.teachertoolkit.co.uk), national newspapers (The Guardian-1, Independent), the Times Educational Supplement (TES), the National Audit Office (NAO, 2017) the Education Policy Institute (EPI-1), plus the Department for Education’s latest figures as seen in the School Workforce Census (DfE, 2019), show a secondary school teaching workforce in crisis.

These latest statistics from the School Workforce Census show the effect on young graduates joining the teaching profession – dropout rates are rising, and each year’s graduates are more likely to leave the profession than the previous year’s. The data shows that only 85% of 2017 graduates were still in the profession after one year, compared to 88% of 2011 graduates. One may consider a 3% fall as negligible, but I’d argue this is not the case as the numbers involved are significant, with over 3,600 Newly Qualified Teachers (NQTs) quitting teaching just a year after starting out in the profession. If the retention rate had remained at the 2011 level, the profession would have kept 820 more teachers. The trend continues as teachers move through their early career with years one to five showing the highest

rates of attrition, for example, on average only 67% of teachers remain in the profession by the end of their fifth year, and worryingly the rate at which they are leaving has also increased (EPI-2).

However, the issue of teacher retention is not limited to those in the first five years of their career, as a recent workload survey has suggested 81% of teachers have considered leaving the profession in the last year because of workload (NEU, 2018). To compound the issue, the Government has repeatedly failed to hit recruitment targets for secondary schools for seven years in a row (The Guardian-2) with recruitment levels falling by 19% in 2018 compared to 2017 (TES). This has resulted in teacher attrition exceeding recruitment, leading to a reduction of 10,800 (4.9%) teachers between 2010 and 2016 (NAO, 2017).

To add to the problem, there is also a population bulge that has worked its way through primary schools over the past few years and is about to hit secondary schools, increasing their student numbers by nearly 540,000 (19.4%) between 2017 and 2025. So far, the Government has not clarified how it expects schools to cope with the increased pressure (NAO, 2017). Despite the Government’s best efforts, today’s statistics are consistent with the message of TALIS 2018 (Jerrim and Sims,

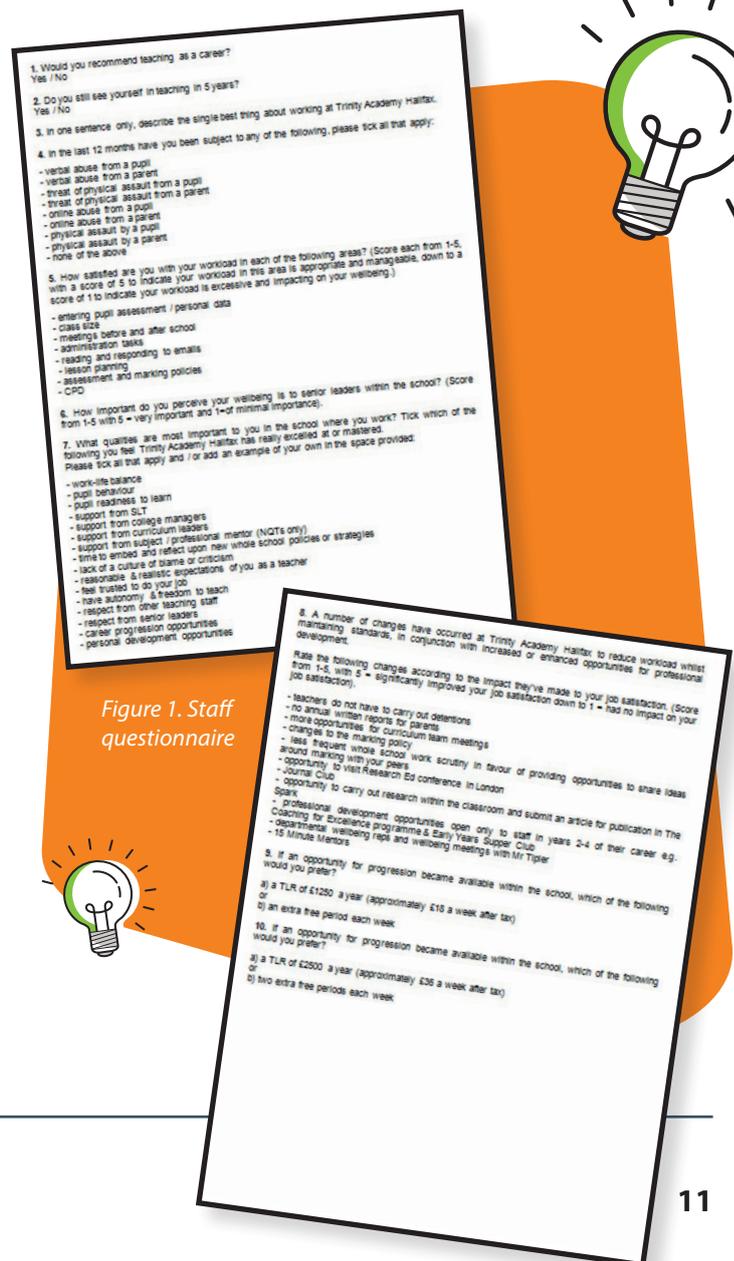
2019): secondary teachers are unhappy with their jobs and are quitting the profession at an increasing rate.

The Government has attempted to improve the retention of young teachers in the profession through the Workload Challenge, launched in 2014, the creation of a workload advisory group, the publication of a workload reduction toolkit in 2018 and the publication of the Teacher Recruitment and Retention Strategy in 2019, which included a new Early Career Framework and retention payments in shortage subjects. However, the release of the OECD's TALIS survey of teachers in 2018 (Jerrim and Sims, 2019) found that, despite these efforts, full-time, secondary teachers' working hours have risen from 48.2 hours per week in 2013 to 49.3 hours in 2018. In addition to this, a recent study found that a quarter of teachers work more than 60 hours per week during term time (Allen et al., 2019). Unsurprisingly, their job satisfaction declined over the same period, which also explains why teacher workload is cited as the main reason behind leaving the profession.

This study seeks to identify what factors contribute most to teacher workload and associated levels of stress within a large comprehensive secondary school in West Yorkshire. The study will focus on teachers in years one to five of the profession and aims to discern what whole-school initiatives have increased or decreased the likelihood of teachers leaving the school and/or the profession altogether. The ultimate aim is to use the results of this research to inform future planning and consideration prior to introducing new whole-school initiatives with the aim of minimising workload (but not at the expense of student outcomes) and maximising retention of the high-quality teaching staff that work at the school.

Methodology

A total of 40 staff in years one to five of their teaching career were invited to complete an anonymous online questionnaire (see Figure 1 and Appendix 1) to identify which practices have reduced workload and/or improved staff well-being and teacher retention. To maximise use of the data and to allow comparisons between cohorts, data from the NQT cohort was collected separately from the Recently Qualified Teacher+ (RQT) cohort (years two to five). Of the 15 teachers in the NQT cohort, 13 completed the questionnaire (86.7%), compared with 20 of 25 from the RQT+ cohort (80%).





Research findings

When asked 'Would you recommend teaching as a career?' 97% of the teachers that responded said 'yes,' with only one NQT stating 'no.' When asked 'Do you see yourself in teaching in five years?' 93% said yes. One NQT and one teacher from the RQT+ cohort said 'no.' The responses to question 3, which asks staff to describe the 'single best thing about working at the school,' have been loosely grouped to aid analysis (see Table 1).

	NQT	RQT+
Work ethic of staff	7.7%	5%
Support from colleagues	53.8%	60%
Effective systems	7.7%	10%
Community spirit	15.4%	15%
The students	7.7%	0%
Incredible place to work	7.7%	0%
Effective leadership	0%	5%
Staff are valued	0%	5%

Table 1: Staff responses to Q3 - Describe the single best thing about working at Trinity Academy Halifax

In order to determine the level of abuse that staff are exposed to whilst at work, they were asked if they had been subject to any of the following in the last 12 months (see Table 2).

	NQT	RQT+
Verbal abuse from a student	61.5%	73.7%
Verbal abuse from a parent	23.1%	15.8%
Threat of physical assault from a student	0%	15.8%
Threat of physical assault from a parent	0%	0%
Online abuse from a student	7.7%	0%
Online abuse from a parent	0%	0%
Physical assault by a student	0%	5.3%
Physical assault by a parent	0%	0%
None of the above	38.5%	26.3%

Table 2: Staff responses to Q4 - Have you been subject to any of the following?

In an attempt to establish the major factors contributing to workload, staff were asked to score several criteria out of five. A score of one indicates workload is excessive and impacting

on well-being, whereas a score of five indicates workload is fair and manageable. Results can be seen in Table 3.

	NQT	RQT+
Entering student assessment / personal data	4.4	3.3
Class size	4.0	4.1
Meetings before and after school	4.0	3.3
Administration tasks	3.9	3.3
Reading and responding to emails	3.9	3.7
Lesson planning	3.9	3.8
Assessment and marking policies	3.6	3.5
CPD	4.0	3.2

Table 3: Staff responses to Q5 - How satisfied are you with your workload?

Question 6 seeks to identify how much of a priority staff well-being is perceived to be within the Senior Leadership Group (SLG). The results from both the NQT and RQT+ cohorts have been pooled below. A score of five indicates that staff believe the SLG consider their well-being to be very important, and a score of one indicates staff believe the SLG consider their well-being to be of minimal importance (see Table 4).

	1 (minimal importance)	2	3	4	5 (very important)	Number of responses	Mean Score (Σ/5)
NQT	0%	0%	46.2%	46.2%	7.7%	13	3.6
RQT+	5%	25%	30%	30%	10%	20	3.2

Table 4: Staff responses to Q6-How important do you perceive your wellbeing is to senior leaders?

Question 7 seeks to determine what processes the school excels at or has truly mastered from the point of view of the teachers (in years one to five of their career) that work there. Staff were advised to tick all that applied in their opinion (see Table 5).

	NQT	RQT+
Work-life balance	15.4%	10%
Student behaviour	84.6%	95%
Student readiness to learn	38.5%	35%
Support from SLT	53.9%	65%
Support from college managers	53.9%	60%
Support from curriculum leaders	92.3%	85%
Support from subject / professional mentor (NQTs only)	84.6%	15%

Time to embed and reflect upon new whole school policies or strategies	30.8%	15%
Lack of a culture of blame or criticism	38.5%	40%
Reasonable & realistic expectations of you as a teacher	53.9%	40%
Feel trusted to do your job	92.3%	60%
Have autonomy & freedom to teach	53.9%	40%
Respect from other teaching staff	76.9%	70%
Respect from senior leaders	61.5%	50%
Career progression opportunities	30.8%	40%
Personal development opportunities	30.8%	55%

Table 5: Staff responses to Q7 - Which of the following do you think the school excels at or has mastered?

In an attempt to identify which whole-school policies and practices have reduced workload for staff and increased or enhanced opportunities for professional development, in question 8 staff were asked to score 11 factors out of five. A score of five indicates that the factor has significantly improved job satisfaction, whereas a score of one indicates that the factor has had no impact on job satisfaction (see Table 6).

	NQT	RQT+
Teachers do not have to carry out detentions	5.0	4.8
No annual written reports for parents	4.9	4.8
More opportunities for curriculum team meetings	4.5	3.9
Changes to the marking policy	4.0	3.9
Less frequent whole school work scrutiny in favour of providing opportunities to share ideas around marking with your peers	4.5	4.1
Opportunity to visit Research Ed conference in London	3.4	3.3
Journal Club	2.9	2.9
Opportunity to carry out research within the classroom and submit an article for publication in The Spark	2.6	2.9
Professional development opportunities open only to staff in years 2-4 of their career e.g. Coaching for Excellence programme & Early Years Supper Club	2.9	3.7
Departmental wellbeing reps and wellbeing meetings with Mr Tipler	3.1	3.0
15 Minute Mentors	3.4	3.0

Table 6: Staff responses to Q8 - Which of the following factors have improved job satisfaction

A common reason cited by staff in years one to five of their career for leaving a school is career progression. With that in mind, questions 9 and 10 seek to determine what staff would value more if they were offered more responsibility within school: time or an increase in salary. The results from both the NQT and RQT+ cohorts are pooled in Table 7 below.

		NQT	RQT+
Question 9	A TLR of £1250	69.2%	90%
	An extra free period per week	30.8%	10%
Question 10	A TLR of £2500	84.6%	95%
	An extra two free periods per week	15.4%	5%

Table 7: Staff responses to Q9 & Q10 - In terms of progression which of the following would you prefer?

Impact and reflection

On average, only 67% of teachers remain in the teaching profession by the end of their fifth year, and worryingly the rate at which they are leaving has also increased (EPI-2). Plus, a recent workload survey has suggested 81% of teachers have considered leaving the profession in the last year because of workload (NEU, 2018). However, the results from this study are not in line with the national picture, with 97% of teachers stating they would recommend teaching as a profession, compared with 27% of teachers nationally (NASUWT, 2019). Plus, 93% see themselves still teaching in five years. Responses to question 3 suggest that support from the people around them within school is the biggest driver toward retaining teachers in this context.

In terms of verbal abuse from students within the last 12 months, 61.5% of NQTs and 73.7% of the RQT+ cohort said they had received this type of abuse, slightly higher than the national figure of 57%. However, for all other types of abuse

or assault measured in this survey, figures for this school are lower than national figures, and in most cases significantly so (NASUWT, 2019). Interestingly, in spite of having a higher than national figure in terms of 'verbal abuse received from students,' 84.6% and 95% of the NQT and RQT+ cohorts respectively state that the school in this study has truly 'mastered' student behaviour, compared to 56% of teachers nationally who believe they have a behaviour problem in their school (NASUWT, 2019). The inconsistency in these findings could be attributed to the wording of the question in the questionnaire, as a member of staff who has received verbal abuse from a single student in 12 months would have ticked this box, but this would hardly be indicative of a widespread behaviour problem within the school.

In terms of assessing workload, an average score of five for a particular factor indicates that workload is fair and manageable, whereas a score of one indicates workload is excessive and impacting on staff well-being. Overall, figures for the RQT+ cohort are slightly lower than the NQT cohort, with the most significant differences found with 'entering student data' (NQT = 4.4 and RQT+ = 3.3) and 'CPD' (NQT = 4.0 and RQT+ = 3.2) (see Table 3). In terms of accounting for the difference in scores when considering 'entering student data,' teachers from the RQT+ cohort are more likely to have a larger number of Phase Two classes along with the marking and data entry associated with repeated mock/trial exams which could account for the lower score.

In terms of continuing professional development (CPD) and workload it could be argued that NQTs are more receptive to and value CPD more as they are at the very start of their career and still consider themselves a novice within the classroom with still much to learn. In addition to this, the RQT+ cohort gave their second lowest score of 15% (in terms of practices that the school excels at) to 'time to embed and reflect upon new whole-school policies or strategies.' This

suggests that in order to add value and reduce the perceived workload associated with CPD, the time allocated to launching and embedding new ideas and new processes through whole-school CPD could be reconsidered.



In further reference to workload, figures for the NQT cohort show little variability with most factors scoring in the region of 4 points. However, the lowest score of 3.6 was linked to workload associated with 'marking and assessment,' comparable to the RQT+ figure of 3.5. It should be noted that both figures, although considered low compared to other factors cited in this study, remain a considerable distance away from a score that suggests workload is unmanageable and impacting on well-being. However, despite recent changes to the whole-school marking policy, 'marking and assessment' are two areas which could be considered for further reductions in workload as 90% of teachers nationally consider workload a serious problem at their school (EPI-3, 2019).

Data yielded from question 6 (see Table 4) which seeks to identify how much of a priority staff well-being is perceived to be within the SLG is unremarkable, with scores of 3.6 and 3.2 from the NQT and RQT cohorts respectively. However, the results do compare favourably to national data in which 65% of teachers reported that their well-being is not considered to be important by their school, and over 86% said that their job has impacted negatively on their well-being (NASUWT, 2019). Nonetheless, scores of 3.6 and 3.2 lie close to the median value which suggests there is capacity to raise the profile of staff well-being and engender the idea that staff well-being is a priority within the school, as staff who are happy, healthy, highly motivated and hardworking will be at their most productive, which in turn is likely to lead to improved student outcomes.

In order to identify the practices and processes that exist at the school and are considered to be effective by staff in years one to five of their career, staff were asked to select the practices that the

school has truly mastered or excelled at (see Table 5). The practice with the highest rating for staff in both the NQT and RQT+ cohort was 'student behaviour', which can be attributed to the rigorous and effective behaviour policy which exists within the school. Unfortunately, 'work-life balance' scored the lowest with only 15.4% of NQTs and 10% of staff in the RQT+ cohort stating that the school has achieved an appropriate work-life balance. However, this is in line with the national picture as many teachers (83%) stated that they frequently worried about work problems when not at work, and only 11% stated that they were able to relax at home (NASUWT, 2019). 'Support from curriculum leaders' scored highly with both staff groups (92.3% and 85%), and 'support from subject/professional mentors' scored highly with the NQT cohort (84.6%). When added to responses from question 3 where 'support from colleagues' was identified as the highest scoring factor (see Table 1), this data consolidates the notion that it's the staff that really make the difference in this institution.

A future area worth investigating could be 'time to embed and reflect upon new whole-school policies or strategies' as this received the second lowest scores from both cohorts. Is it the amount of time given over to launching new policies, the time of year when they are launched or the time spent reviewing and consolidating new practices once they have been introduced that needs attention? Dylan William states that:

"Teachers can only change very slowly, so it's not about replacing one technique with another, it's about building new expertise and you can only build expertise through many repetitions. We don't need to give teachers new knowledge, we need to help them change classroom practices, and the hardest bit is not getting new ideas into their head, it's getting the old ones out. So, we need to create time and space for teachers to reflect on their practice."

Do we need to allocate more time and space for teachers to engage with CPD and consolidate

new ideas and practices, but not at the expense of reducing time available to undertake all the other activities that teachers need to stay on top of?

To identify the impact of strategies used within school to reduce workload and increase opportunities for professional development, question 8 asked staff to score each practice out of five. A score of five indicates that practice has significantly increased job satisfaction, whereas a score of one would indicate the practice in question has had no impact on job satisfaction (see Table 6). The two highest scoring practices were 'teachers do not have to carry out detentions' (NQT = 5.0 and RQT+ = 4.8) and 'no annual written reports for parents' (NQT = 4.9 and RQT+ = 4.8). Both strategies have given staff back most of that which they crave: time. Having worked in a school which insisted upon staff completing both the above activities, I can support the conclusion that freeing up this time improves well-being and allows staff more time to work on planning effective learning and assessment opportunities for students.

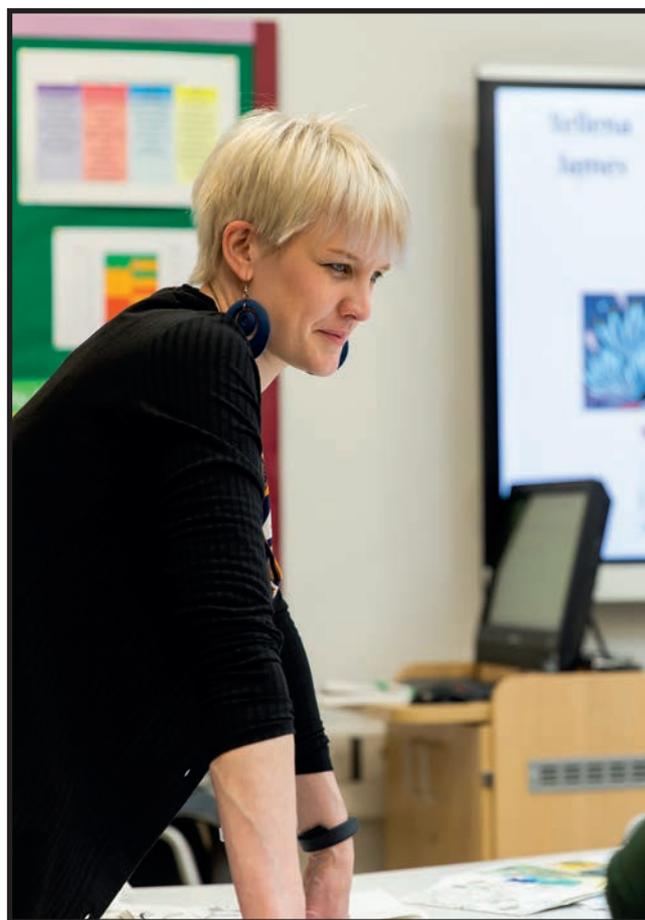
It's also insightful to learn that three new strategies launched in the last 18 months, namely, 'more opportunities for curriculum team meetings', 'changes to the marking policy' and 'less frequent whole-school work scrutiny', showed high scores ranging from 3.9 to 4.5, indicating these strategies have improved job satisfaction by reducing workload and allowing more time for the sharing of good practice in terms of curriculum development and marking. 'Professional development opportunities open only to staff in years two to four' also scored highly with the RQT+ cohort (3.7), which supports the idea that these strategies have been successful in improving staff retention, especially when this data is placed alongside the staff turnover figure for the last academic year of 2.5% of teachers in years one to five, which compares favourably with the national figure of 10% (DfE, 2019).

Finally, as school budgets become ever more stretched, yet a thirst for career progression still exists amongst teachers in the early stages of their career,

it would be useful to learn if increased non-contact time would be a viable alternative to an increase in salary when staff take on extra responsibilities. However, responses to questions 9 and 10 clearly show that 'cash is king' as most teachers (between 69-95%) would prefer a Teaching and Learning Responsibility (TLR) payment over additional non-contact time (see Table 7).

In summary, the following can be gleaned from this study:

- Support from colleagues is highly valued in this setting.
- 93% of teachers surveyed see themselves in teaching in five years.
- Staff receive less verbal, physical and online abuse from parents, and less physical and online abuse from students when compared to national figures.
- Marking and Assessment policies contribute most to workload for NQTs.
- Time allocated to embedding and reflecting upon new whole-school policies or strategies could be reviewed.
- Retention of staff in years one to five of their teaching career has improved significantly in the last year, possibly as a result of the new initiatives discussed above.
- Staff prefer an increase in salary as opposed to additional non-contact time when taking on extra responsibilities.





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- EPI-3 <https://epi.org.uk/publications-and-research/what-is-happening-with-teachers-workloads/>
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- The Guardian-2 <https://www.theguardian.com/education/2019/nov/28/govern->

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Appendix

Appendix 1. Staff questionnaire

1. Would you recommend teaching as a career?
Yes / No
2. Do you still see yourself in teaching in 5 years?
Yes / No
3. In one sentence only, describe the single best thing about working at Trinity Academy Halifax.
4. In the last 12 months have you been subject to any of the following, please tick all that apply:
 - verbal abuse from a student
 - verbal abuse from a parent
 - threat of physical assault from a student
 - threat of physical assault from a parent
 - online abuse from a student
 - online abuse from a parent
 - physical assault by a student
 - physical assault by a parent
 - none of the above
5. How satisfied are you with your workload in each of the following areas? (Score each from 1-5, with a score of 5 to indicate your workload in this area is appropriate and manageable, down to a score of 1 to indicate your workload is excessive and impacting on your wellbeing.)
 - entering student assessment / personal data
 - class size
 - meetings before and after school
 - administration tasks
 - reading and responding to emails
 - lesson planning
 - assessment and marking policies
 - CPD
6. How important do you perceive your wellbeing is to senior leaders within the school? (Score from

1-5 with 5 = very important and 1=of minimal importance).

7. What qualities are most important to you in the school where you work? Tick which of the following you feel Trinity Academy Halifax has really excelled at or mastered.

Please tick all that apply and / or add an example of your own in the space provided:

- work-life balance
- student behaviour
- student readiness to learn
- support from SLT
- support from college managers
- support from curriculum leaders
- support from subject / professional mentor (NQTs only)
- time to embed and reflect upon new whole school policies or strategies
- lack of a culture of blame or criticism
- reasonable & realistic expectations of you as a teacher
- feel trusted to do your job
- have autonomy & freedom to teach
- respect from other teaching staff
- respect from senior leaders
- career progression opportunities
- personal development opportunities

8. Several changes have occurred at Trinity Academy Halifax to reduce workload whilst maintaining standards, in conjunction with increased or enhanced opportunities for professional development.

Rate the following changes according to the impact they've made to your job satisfaction. (Score from 1-5, with 5 = significantly improved your job satisfaction down to 1 = had no impact on your job satisfaction).

- teachers do not have to carry out detentions
- no annual written reports for parents
- more opportunities for curriculum team meetings
- changes to the marking policy
- less frequent whole school work scrutiny in

favour of providing opportunities to share ideas around marking with your peers

- opportunity to visit Research Ed conference in London
- Journal Club
- opportunity to carry out research within the classroom and submit an article for publication in The Spark
- professional development opportunities open only to staff in years 2-4 of their career e.g. Coaching for Excellence programme & Early Years Supper Club
- departmental wellbeing reps and wellbeing meetings with Mr Tipler
- 15 Minute Mentors

9. If an opportunity for progression became available within the school, which of the following would you prefer?

a) a TLR of £1250 a year (approximately £18 a week after tax)

or

b) an extra free period each week

10. If an opportunity for progression became available within the school, which of the following would you prefer?

a) a TLR of £2500 a year (approximately £36 a week after tax)

or

b) two extra free periods each week

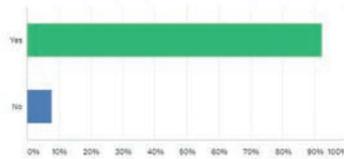


Appendix 2. Results from NQT questionnaire

Q1 Customize Save as

Would you recommend teaching as a career?

Answered: 13 Skipped: 0

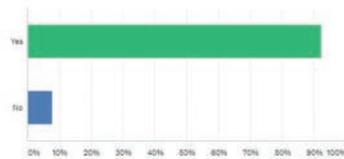


ANSWER CHOICES	RESPONSES	TOTAL
Yes	92.31%	12
No	7.69%	1
TOTAL		13

Q2 Customize Save as

Do you still see yourself in teaching in 5 years?

Answered: 13 Skipped: 0



ANSWER CHOICES	RESPONSES	TOTAL
Yes	92.31%	12
No	7.69%	1
TOTAL		13

Q3 Save as

In one sentence only, describe the single best thing about working at Trinity Academy Halifax.

Answered: 13 Skipped: 0

RESPONSES (13) WORD CLOUD TAGS (0) Sentiments: Off

Showing 13 responses

- Everyone seems to be in the same mindset to better themselves which gives the work environment a great atmosphere. 5/21/2020 10:49 AM
- The sense of community between both subject staff and the wider school. 5/21/2020 10:44 AM
- Everyone cares. 5/20/2020 8:50 AM
- Working at Trinity Academy Halifax means feeling a part of something incredible. 5/21/2020 3:33 PM
- The support you get from everyone - department, college managers, LSA's, SLG etc. 5/21/2020 3:00 PM
- It doesn't matter who you ask or what you ask everyone's attitude is "what can I do to help?" not, "what do you want?". 5/21/2020 12:40 PM
- The students - range of their abilities, characteristics and interests. 5/21/2020 12:36 PM
- Support and clarity of expectation 5/21/2020 12:29 PM
- The structures (such as BFL policy) that are put in place allow us to focus on and develop our teaching. 5/21/2020 12:11 PM
- The amount and quality of support from curriculum teams and leaders is amazing. 5/21/2020 11:57 AM
- Really supportive colleagues 5/21/2020 11:57 AM
- The colleagues in my department - we're a great team! 5/21/2020 11:53 AM
- My colleagues 5/21/2020 11:52 AM

Q4 Customize Save as

In the last 12 months have you been subject to any of the following, please tick all that apply:

Answered: 13 Skipped: 0

ANSWER CHOICES	RESPONSES
verbal abuse from a pupil	61.54% 8
verbal abuse from a parent	23.08% 3
threat of physical assault from a pupil	0.00% 0
threat of physical assault from a parent	0.00% 0
online abuse from a pupil	7.69% 1
online abuse from a parent	0.00% 0
physical assault by a pupil	0.00% 0
physical assault by a parent	0.00% 0
none of the above	38.46% 5
Total Respondents: 13	

Q5 Customize Save as

How satisfied are you with your workload in each of the following areas? (Score each from 1-5, where 5=workload is appropriate & manageable, down to a score of 1=workload is excessive & impacting on your wellbeing.)

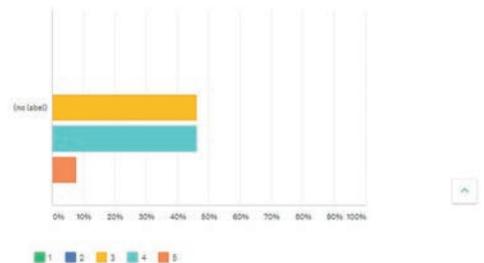
Answered: 13 Skipped: 0

	1	2	3	4	5	TOTAL	WEIGHTED AVERAGE
entering pupil assessment / personal data	0.00% 0	7.69% 1	15.38% 2	7.69% 1	69.23% 9	13	4.38
class size	7.69% 1	7.69% 1	7.69% 1	30.77% 4	46.05% 6	13	4.00
meetings before and after school	0.00% 0	7.69% 1	15.38% 2	46.15% 6	30.77% 4	13	4.00
administration tasks	0.00% 0	7.69% 1	23.08% 3	38.46% 5	30.77% 4	13	3.92
reading and responding to emails (prior to lockdown)	7.69% 1	0.00% 0	7.69% 1	61.54% 8	23.08% 3	13	3.92
lesson planning	0.00% 0	15.38% 2	23.08% 3	15.38% 2	46.15% 6	13	3.82
assessment and marking policies	0.00% 0	0.00% 0	46.15% 6	46.15% 6	7.69% 1	13	3.62
CPD	7.69% 1	0.00% 0	15.38% 2	38.46% 5	38.46% 5	13	4.00

Q6 Customize Save as

How important do you perceive your wellbeing is to senior leaders within the school? (Score from 1-5 with 5 = very important and 1=of minimal importance)

Answered: 13 Skipped: 0



	1	2	3	4	5	TOTAL	WEIGHTED AVERAGE
(no label)	0.00% 0	0.00% 0	46.15% 6	46.15% 6	7.69% 1	13	3.62

Q7 Customize Save as

Tick which of the following you feel Trinity Academy Halifax has really excelled at or mastered. Please tick all that apply and / or add an example of your own in the space provided:

Answered: 13 Skipped: 0

ANSWER CHOICES	RESPONSES
work-life balance	15.38% 2
pupil behaviour	84.62% 11
pupil readiness to learn	38.46% 5
support from SLT	53.85% 7
support from college managers	53.85% 7
support from curriculum leaders	92.31% 12
support from subject / professional mentor (NQTs only)	84.62% 11
time to embed and reflect upon new whole school policies or strategies	30.77% 4
lack of a culture of blame or criticism	38.46% 5
reasonable & realistic expectations of you as a teacher	53.85% 7
feel trusted to do your job	92.31% 12
have autonomy & freedom to teach	53.85% 7
respect from other teaching staff	76.92% 10
respect from senior leaders	61.54% 8
career progression opportunities	30.77% 4
personal development opportunities	30.77% 4
Total Respondents: 13	

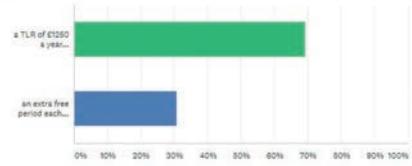
A number of changes have occurred at Trinity Academy Halifax to reduce workload whilst maintaining standards, in conjunction with increased or enhanced opportunities for professional development. Rate the following changes according to the impact they've made to your job satisfaction. (Score from 1-5, with 5 = significantly improved your job satisfaction down to 1 = had no impact on your job satisfaction).

Answered: 13 Skipped: 0

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	TOTAL	WEIGHTED AVERAGE				
Teachers do not have to carry out demonstrations	0.00%	0	0.00%	0	0.00%	100.00%	13	5.00			
no annual written reports for parents	0.00%	0	0.00%	0	7.69%	90.31%	13	4.92			
more opportunities for curriculum team meetings	0.00%	0	0.00%	15.38%	23.08%	81.54%	13	4.45			
changes to the marking policy	7.69%	1	0.00%	7.69%	53.85%	30.77%	13	4.00			
less frequent whole school work scrutiny in favour of providing opportunities to share ideas around marking with your peers	0.00%	0	0.00%	15.38%	15.38%	69.23%	13	4.54			
opportunity to visit Research Ed conference in London	25.00%	3	8.33%	1	0.00%	33.33%	4	3.42			
Journal Club	25.00%	3	16.67%	2	16.67%	25.00%	3	16.67%	2	2.92	
opportunity to carry out research within the classroom and submit an article for publication in The Spark	33.33%	4	16.67%	2	16.67%	25.00%	3	8.33%	1	2.58	
professional development opportunities open only to staff in years 2-4 of their career e.g. Coaching for Excellence & Early Years Support Club	25.00%	3	16.67%	2	25.00%	3	8.33%	1	25.00%	3	2.92
departmental wellbeing sign and wellbeing bulletin and meetings with Mr Tipler	23.08%	3	15.38%	2	23.08%	3	7.69%	1	30.77%	4	3.08
15 Minute Mentors	15.38%	2	7.69%	1	15.38%	2	46.15%	5	15.38%	2	3.38

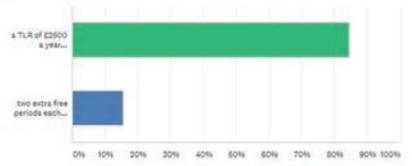
If an opportunity for progression became available within the school, which one of the following would you prefer?

Answered: 13 Skipped: 0



If an opportunity for progression became available within the school, which one of the following would you prefer?

Answered: 13 Skipped: 0

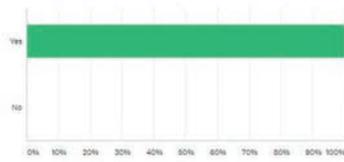


Appendix 3. Results from RQT+ questionnaire

Q1 Customize Save as

Would you recommend teaching as a career?

Answered: 20 Skipped: 0

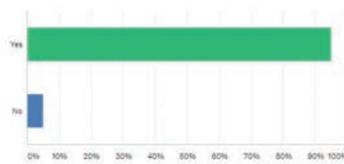


ANSWER CHOICES	RESPONSES	COUNT
Yes	100.00%	20
No	0.00%	0
TOTAL		20

Q2 Customize Save as

Do you still see yourself in teaching in 5 years?

Answered: 20 Skipped: 0



ANSWER CHOICES	RESPONSES	COUNT
Yes	95.00%	19
No	5.00%	1
TOTAL		20



Q3 Save as

In one sentence only, describe the single best thing about working at Trinity Academy Halifax.

Answered: 20 Skipped: 0

RESPONSES (20) WORD CLOUD TAGS (0) Sentiments: OFF

Apply to selected Filter by tag Search responses

- Showing 20 responses
- My colleagues
5/31/2020 10:49 AM [View respondent's answers](#) [Add tags](#)
 - My team
5/31/2020 9:32 AM [View respondent's answers](#) [Add tags](#)
 - The standards are exceptionally high; I pride myself on providing the best for students, and everything and everybody at Trinity is in place to do the same. It inspires me to work with people who have the same standards and work ethic.
5/29/2020 9:39 AM [View respondent's answers](#) [Add tags](#)
 - A fair and structured behavior system for both teacher and child, with fantastic teacher support and career developments.
5/28/2020 11:33 AM [View respondent's answers](#) [Add tags](#)
 - The support from all staff
5/28/2020 10:05 AM [View respondent's answers](#) [Add tags](#)
 - Staff
5/27/2020 4:53 PM [View respondent's answers](#) [Add tags](#)
 - The support I get from within my department is incredible
5/27/2020 2:10 PM [View respondent's answers](#) [Add tags](#)
 - Collaborative, Inspiring and supportive colleagues
5/27/2020 1:25 PM [View respondent's answers](#) [Add tags](#)
 - The support systems/network in place that allow you to do your job to the best of your ability.
5/27/2020 12:51 PM [View respondent's answers](#) [Add tags](#)
 - The thoughtful approach of all levels of leadership to ensure that all teachers can work in an effective and efficient manner.
5/27/2020 12:38 PM [View respondent's answers](#) [Add tags](#)
 - Support
5/27/2020 12:10 PM [View respondent's answers](#) [Add tags](#)
 - Community feel
5/27/2020 12:06 PM [View respondent's answers](#) [Add tags](#)
 - How valued all staff members are made to feel
5/27/2020 12:01 PM [View respondent's answers](#) [Add tags](#)
 - Challenges to be the best teacher I can be
5/27/2020 11:56 AM [View respondent's answers](#) [Add tags](#)
 - The department
5/27/2020 11:52 AM [View respondent's answers](#) [Add tags](#)
 - Organised
5/27/2020 11:50 AM [View respondent's answers](#) [Add tags](#)
 - Because everyone genuinely cares about students from working class and impoverished backgrounds, we have excellent practical strategies to support them.
5/27/2020 11:47 AM [View respondent's answers](#) [Add tags](#)
 - Great relationships between colleagues.
5/27/2020 11:46 AM [View respondent's answers](#) [Add tags](#)
 - The team I work with, 100%!
5/27/2020 11:45 AM [View respondent's answers](#) [Add tags](#)
 - Having a great team to work with, department wise and support wise
5/27/2020 11:43 AM [View respondent's answers](#) [Add tags](#)



In the last 12 months have you been subject to any of the following, please tick all that apply:

Answered: 19 Skipped: 1

ANSWER CHOICES	RESPONSES
verbal abuse from a pupil	73.68% 14
verbal abuse from a parent	15.79% 3
threat of physical assault from a pupil	15.79% 3
threat of physical assault from a parent	0.00% 0
online abuse from a pupil	0.00% 0
online abuse from a parent	0.00% 0
physical assault by a pupil	5.26% 1
physical assault by a parent	0.00% 0
none of the above	26.32% 5
Total Respondents: 19	

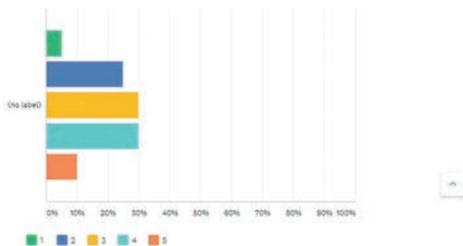
How satisfied are you with your workload in each of the following areas? (Score each from 1-5, where 5=workload is appropriate & manageable, down to a score of 1=workload is excessive & impacting on your wellbeing.)

Answered: 20 Skipped: 0

	1	2	3	4	5	TOTAL	WEIGHTED AVERAGE
entering pupil assessment / personal data	0.00% 0	20.00% 4	40.00% 8	30.00% 6	10.00% 2	20	3.30
class size	0.00% 0	5.00% 1	20.00% 4	35.00% 7	40.00% 8	20	4.10
meetings before and after school	0.00% 0	20.00% 4	45.00% 9	25.00% 5	10.00% 2	20	3.25
administration tasks	0.00% 0	25.00% 5	25.00% 5	40.00% 8	10.00% 2	20	3.35
reading and responding to emails (prior to lockdown)	0.00% 0	15.00% 3	20.00% 4	50.00% 10	15.00% 3	20	3.65
lesson planning	0.00% 0	15.79% 3	15.79% 3	42.11% 8	26.32% 5	19	3.79
assessment and marking policies	0.00% 0	20.00% 4	35.00% 7	30.00% 6	25.00% 5	20	3.50
CPD	5.00% 1	20.00% 4	35.00% 7	30.00% 6	10.00% 2	20	3.20

How important do you perceive your wellbeing is to senior leaders within the school? (Score from 1-5 with 5 = very important and 1=of minimal importance)

Answered: 20 Skipped: 0



	1	2	3	4	5	TOTAL	WEIGHTED AVERAGE
(no label)	5.00% 1	25.00% 5	30.00% 6	30.00% 6	10.00% 2	20	3.15

Tick which of the following you feel Trinity Academy Halifax has really excelled at or mastered. Please tick all that apply and / or add an example of your own in the space provided:

Answered: 20 Skipped: 0

ANSWER CHOICES	RESPONSES
work-life balance	10.00% 2
pupil behaviour	95.00% 19
pupil readiness to learn	35.00% 7
support from SLT	65.00% 13
support from college managers	60.00% 12
support from curriculum leaders	65.00% 13
support from subject / professional mentor (NQTs only)	15.00% 3
time to embed and reflect upon new whole school policies or strategies	15.00% 3
lack of a culture of blame or criticism	40.00% 8
reasonable & realistic expectations of you as a teacher	40.00% 8
Feel trusted to do your job	60.00% 12
have autonomy & freedom to teach	40.00% 8
respect from other teaching staff	70.00% 14
respect from senior leaders	50.00% 10
career progression opportunities	40.00% 8
personal development opportunities	55.00% 11
Total Respondents: 20	

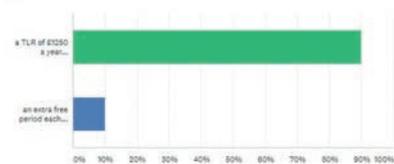
A number of changes have occurred at Trinity Academy Halifax to reduce workload whilst maintaining standards, in conjunction with increased or enhanced opportunities for professional development. Rate the following changes according to the impact they've made to your job satisfaction. (Score from 1-5, with 5 = significantly improved your job satisfaction down to 1 = had no impact on your job satisfaction).

Answered: 20 Skipped: 0

	1	2	3	4	5	TOTAL	WEIGHTED AVERAGE
teachers do not have to carry out detentions	0.00% 0	0.00% 0	5.00% 1	10.00% 2	85.00% 17	20	4.20
no annual written reports for parents	0.00% 0	0.00% 0	5.00% 1	15.00% 3	80.00% 16	20	4.75
more opportunities for curriculum team meetings	5.00% 1	0.00% 0	35.00% 7	25.00% 5	35.00% 7	20	3.85
changes to the marking policy	5.00% 1	5.00% 1	15.00% 3	45.00% 9	30.00% 6	20	3.90
less frequent whole school work scrutiny in favour of providing opportunities to share ideas around marking with your peers	0.00% 0	5.00% 1	20.00% 4	40.00% 8	35.00% 7	20	4.05
opportunity to visit Research Ed conference in London	5.26% 1	21.05% 4	42.11% 8	5.26% 1	26.32% 5	19	3.28
Journal Club	20.00% 4	20.00% 4	30.00% 6	18.00% 3	12.00% 2	20	2.85
opportunity to carry out research within the classroom and submit an article for publication in The Spark	10.53% 2	31.58% 6	36.84% 7	0.00% 0	21.05% 4	19	2.89
professional development opportunities open only to staff in years 2-4 of their career e.g. Coaching for Excellence & Early Years Support Club	5.26% 1	0.00% 0	31.58% 6	42.11% 8	21.05% 4	19	3.74
departmental wellbeing sign and wellbeing bulletin & meetings with Mr Titter	20.00% 4	20.00% 4	20.00% 4	25.00% 5	15.00% 3	20	2.95
15 Minute Mentors	10.53% 2	10.53% 2	57.89% 11	10.53% 2	10.53% 2	19	3.00

If an opportunity for progression became available within the school, which one of the following would you prefer?

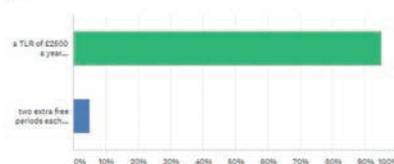
Answered: 20 Skipped: 0



ANSWER CHOICES	RESPONSES
a TLR of £250 a year (approximately £18 a week after tax)	85.00% 17
an extra free period each week	10.00% 2
TOTAL	20

If an opportunity for progression became available within the school, which one of the following would you prefer?

Answered: 20 Skipped: 0



ANSWER CHOICES	RESPONSES
a TLR of £250 a year (approximately £18 a week after tax)	85.00% 17
two extra free periods each week	5.00% 1
TOTAL	20



Does collaborative learning have a positive impact on students' use of SPAG and different sentence types in extended writing activities?

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Context of study

The locality of Trinity Academy Halifax dictates that many of our cohort come from the most deprived areas in the country (Indices of Deprivation, 2019), with 42% of children coming from impoverished backgrounds (Trinity Academy Halifax: Student Premium Strategy Statement, 2019). In this community there are some students with very few academic- or career-related aspirations for the future, having often come from homes where there are two or three generations of unemployment. Because of this, many students disengage with education, lack confidence in their ability and have very low self-belief. Another hindrance faced by our students is their difficulty in using correct spoken and written Standard English, due in part to a strong local dialect. My hope is that these barriers to success can be lessened using collaborative learning, which will give the students the confidence they need to tackle challenging tasks.

Collaborative learning is well known for its positive impact across all age groups (EEF Toolkit, 2020). With students no longer fully responsible for the success of a task, they will feel less stressed and so will be more capable of completing the

task at hand. Furthermore, collaborative learning requires an element of student-talk, another teaching practice which has been shown to have a positive impact (100 Ideas for Primary Teachers: Raising Boys' Achievement, 2016). Finally, I hope that working in pairs or groups will mean students are more likely to enjoy their work and therefore engage fully with it. This is also more likely to help foster a life-long love of learning, an aspiration that many teachers have for their students. Collaborative learning and the associated facet of student-talk are particularly relevant to the subject of English. Understanding alternate interpretations and opinions is a key skill of the subject, and one that is best developed by asking questions and listening to a variety of responses. Moreover, developing coherent students who can communicate in different registers and in many situations is one of the most important tasks of an English teacher (Quigley, 2018).

Because different strategies often support different skills, the primary focus of this research will be the students' success using accurate spelling, punctuation and grammar (SPAG) when working collaboratively. A secondary focus will be the students' ability to use a range of sentence types, two skills which are essential both in the students'

upcoming GCSEs as well as their adult lives. These measures have been chosen as they produce quantitative data which can be easily compared, and because they are two essential skills which are necessary for success in English (Quigley, 2018).

Methods

Originally, the aim of this experiment was to compare the students' ability to use key English skills such as language analysis or inference. However, due to changes in the way assessments are scheduled within the English department, this became impossible. In order to produce some comparable data, it was necessary to change the focus of the comparison to students' use of SPAG.

Two classes were chosen: the first, a low-ability Year 8 class, and the second, a high-ability Year 9 class. Both classes followed the same pattern, where the students were first asked to complete one assessment independently. The following assessment was then completed as a pair, with the students planning together and working together to complete the written part of the task. For the collaborative part of the task, pairings were chosen by the teacher in order to support behaviour for learning, as the class contains many students with complex needs.

In order to effectively measure the students' use of correct SPAG, a simple tally chart was used to count how many mistakes were made in each piece of work. As well as mistakes, different kinds of sentences were also tallied, as this can give a quick insight into a student's communicative ability. As well as the data produced with the tally, the lessons were recorded and reflected on systematically, to attempt to unpick what learning occurred during the activities.

Initially, this research study was planned to take place over the course of eight weeks, where the students would have completed four assessments. This would have produced two sets of comparable work to analyse, which would have made the data more reliable and therefore more generalisable to other settings. There would also have been further

scope to experiment with different pairings, such as: friendship groups, randomly assigned and different-sized groups. Unfortunately, due to the sudden closure of the school in March, only one data set has been collected, although it throws up some interesting points for consideration. This early closure also prevented the collection of a final kind of data – questionnaires asking students which practice they preferred and which they found the most beneficial. Students appear to learn well when they are enjoying themselves, therefore it would have been interesting to learn how the students felt about the activities.

Findings

Year 8 – LAP: Within the low-ability Year 8 group, there was a noticeable improvement in the students' use of correct SPAG. In the first controlled assessment, where students were asked to work independently, students made on average 4.4 mistakes. Comparatively, in the collaborative assessment, the six pairs made on average just 2.1 mistakes. Interestingly, in the collaborative assessment, there was one pair who wrote a grammatically perfect essay, whereas no students managed to achieve this independently. Similarly, in the collaborative assessment, four students (in two pairs) included just one mistake, whereas only one student managed to achieve this when working alone.

Independent		Collaborative	
Student name: Student 1	Tally	Student names: Students 1 and 2	Tally
Mistakes		Mistakes	
Capital letter (missing)		Capital letter (missing)	
Capital letter (random)		Capital letter (random)	
Comma (missed)		Comma (missed)	
Comma (incorrectly placed)		Comma (incorrectly placed)	
Full stop (missed)		Full stop (missed)	
Full stop (incorrectly placed)		Full stop (incorrectly placed)	
Missed ?		Missed ?	
Missed !		Missed !	
Incorrectly used : ; -		Incorrectly used : ; -	

Table 1: Tally of mistakes made by students independently compared with collaboratively

The collaborative assessment was, therefore, much more effective at helping students write correctly, with most students reducing their number of mistakes. There were no students who produced more mistakes in the collaborative assessment and just two whose number of mistakes remained the same in both assessments. This means that 83% of students have demonstrated an improvement in terms of their use of SPAG when working with a partner, although the true reasons for this remain unclear.

Student name:	Mistakes (collab)	Mistakes (independent)
	3	6
	3	3
	5	7
	5	
	5	5
	0	2
	3	6
	1	1
	5	
	0	2
		5
		5
		6
	1	6
		6
	1	3
	1	5
	3	6

Table 2. Whole-class comparison of mistakes made independently and collaboratively

Conversely, there doesn't appear to be any noticeable trends within the sentence types data. Most students in this group use only one or two kinds of sentences, which was repeated across both assessments. This suggests that either the students do not know how to produce different kinds of sentences or they are not yet remembering to include them.

Year 9 – HAP: It was much more difficult to ascertain whether collaborative learning had a positive impact on students' use of correct SPAG in this group. One reason for this is referred to as the 'ceiling effect' – where the high ability nature of the class means that errors of this kind are already rare (SAGE, 2010). Independently, only eight students made an error of this kind, with the highest number of errors in one piece of writing being three. These results were more or less identical in the collaborative assessment.

However, there was a small indication that paired groupings produced more eloquent and concise writing, demonstrated by the increased use of a range of sentence types and structures in collaboratively produced pieces of work. For example, one student in the group only used one structure of complex sentence in his independent work, whereas he and his partner used a full range of structures when they worked together. It would be sensible to assume that the student's partner brought this range of sentences to the work, but when compared with his own independent results, it became apparent that he had also lacked a range of sentences. Therefore, the most likely cause of this outcome is that the two students were more equipped to remember to use (and how to use) a range of sentences.

Independent		Collaborative		Independent	
Student name: Student A	Tally	Group name: Students A and B	Tally	Student name: Student B	Tally
Simple sentence		Simple sentence		Simple sentence	
Compound sentence		Compound sentence		Compound sentence	
Complex sentence (sub clause at end)		Complex sentence (sub clause at end)		Complex sentence (sub clause at end)	
Complex sentence (sub clause at beginning)		Complex sentence (sub clause at beginning)		Complex sentence (sub clause at beginning)	
Complex sentence (embedded clause)		Complex sentence (embedded clause)		Complex sentence (embedded clause)	
Compound-complex sentence		Compound-complex sentence		Compound-complex sentence	
Sentence containing 3 or more commas		Sentence containing 3 or more commas		Sentence containing 3 or more commas	

Table 3. Comparison of different kinds of sentences used by two students independently and collaboratively



Reflection and next steps

Overall, it appears that collaboration has had a small but noticeable positive impact in this study, however, it is difficult to ascertain whether this was simply a coincidence or if it can be attributed to the use of collaborative learning. To be certain that collaborative learning works (at least for our students), it would be necessary to repeat this study across all year groups, with a more complete range of abilities. Even then, where the results may be applicable to our cohort, there may be many settings where this learning strategy is not effective. For example, it could be extremely difficult to manage this kind of activity in a class with a diverse range of needs, such as EAL students or those with complex behavioural or SEMH difficulties.

If collaborative learning did play a part in the improvement made by the students, it is still unclear exactly why they improved. Were students more motivated to check and edit their work when the success of another student relied upon them? Were students genuinely able to use complex grammatical structures when they were able to work it out together? Were the students working harder to impress one another? Was there an element of competition at play? It is possible that some of these questions may have been answered if the students had been provided the questionnaire mentioned above.

Despite their perceived (or not) academic improvement, the use of collaborative learning had a direct and noticeable impact on the lessons that were taught. When revisiting lesson reflections it became apparent that the students appeared to be more engaged, with lots of relevant and insightful conversations taking place about important decisions that had to be made. This had a secondary benefit in that most students remained on task and did not need to be challenged to stay focused. Some of these planning discussions even turned into well-spirited debates, with one student asserting precociously: "that is a perceptive inference, but we'll have nothing decent to zoom in to."



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How prevalent is exam anxiety in our students and what can we do to support them?

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Context of study

It has been noted that a significant number of Phase Two students may suffer from high levels of exam anxiety. In a secondary school, success is mostly measured by the results of formal testing. As a Maths teacher, I see the pressure that students put themselves under and have tried a variety of approaches in my classroom to put them at ease. However, with each new wave of Year 11 students arises the same concerns about pressure and stress. This prompted me to wonder: How can we help students overcome exam anxiety from a whole-school perspective?

Exam anxiety in students is not a new phenomenon. Figures show that one in eight secondary school students suffer with a mental health disorder (Whittaker, 2018). While different disorders are more prominent at different stages of childhood, the most prevalent among GCSE and A-level students are emotional disorders such as stress and anxiety. Evidence for this can be found in a survey carried out by the NHS in 2017 which reports that: "The majority of students are more stressed by tests and by schoolwork than by anything else in their lives. About 16-20% of students have high test anxiety, making this

the most prevalent scholastic impairment in our schools today. Another 18% are troubled by moderately-high test anxiety."

In 2017, Childline delivered 3,135 counselling sessions on exam stress – a rise of 11% over the two previous years. A fifth of these took place in May and many students told counsellors they felt the pressure to keep up with revision and workload. As a result, students reported that this stress often led to:

- Depression and anxiety
- Panic attacks
- Low self-esteem
- Self-harming and suicidal thoughts
- Worsening of pre-existing mental health conditions (nspcc.org)



Anxiety interferes with cognitive processes so students with high levels of exam anxiety will not perform as well as students of the same ability with low anxiety. The average impact of high exam anxiety is one grade per subject.

I became aware of a programme of workshops that a professor from Liverpool John Moores University (LJMU) had delivered in schools to help students overcome exam anxiety. The

programme, Strategies to Tackle Exam Pressure & Stress (STEPS), is a six-session workgroup, led by a facilitator. It is based on the principles of cognitive behavioural therapy (CBT) and incorporates study and revision skills. This prompted me to delve deeper into this issue and find out to what extent the students at Trinity Academy Halifax suffer and what we can do to support those that do.

I contacted Professor David Putwain who provided me with the materials needed to deliver the workshops. I was trained remotely in how to deliver the sessions. It was important that the students involved in the study were not those that I taught myself. This would have been a conflict of interest as the students need to feel that they can be honest about how they feel in lessons.

Method

A survey was conducted with 52 students, 12 weeks before exams were due to take place. The two highest-attaining Maths classes were chosen to take part. The reason for this was that, in my experience, high-attaining students have displayed more signs of stress and anxiety about exams and tests than mid–low ability students. The groups were chosen from the same subject for ease of data collection. Given the sensitive nature of the study, students were given the option to opt out if they wished to do so. As the student responses were to be sent off-site to be analysed by the university, a three-letter code was used in place of a student’s full name. This was to ensure anonymity in the data used outside school, but the students that were highlighted in the results could be identified back in school.

Student responses to the survey questions were given using a scale with the options being: strongly agree, agree, neither agree nor disagree, disagree, strongly disagree to a series of statements. These questions were asked in order to provide an indicator of how students feel in and out of the classroom, how they feel about exams and what members of staff do or say that

helps or worsens this. The survey also included a well-being measure with a view to provide a student’s judgement of their satisfaction at school and relationships with peers and staff. 100% of the students involved opted to take the survey.

The survey responses were not viewed by Trinity staff but instead sent straight to LJMU, where the results were analysed by a team of experts who sent back a report detailing the results.

Research findings

The report showed 26.9% reported high levels of exam anxiety. It was stated that: “This is a relatively high figure but is similar to other English secondary schools.” The difference in gender was large – 31.6% of female students compared to 7.7% of male students reported high levels of exam anxiety.

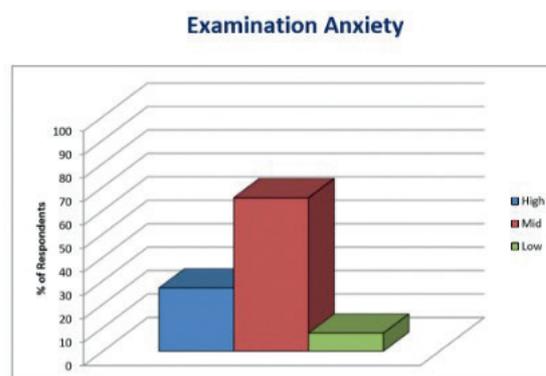


Figure 1. The % of Year 11 students reporting high, mid, and low exam anxiety.

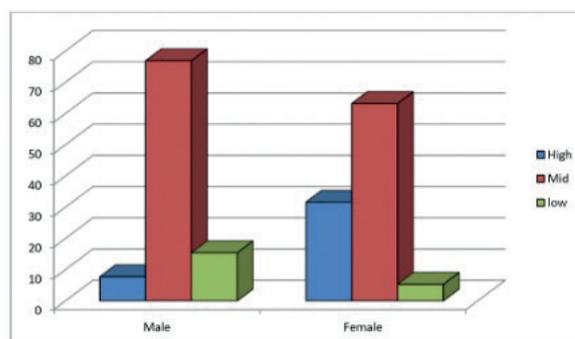


Figure 2. The % of students reporting high, mid, and low exam anxiety, by gender.

In total, 96.2% of students reported either moderate or high levels of school-related well-being. No male students reported low

well-being but 5.3% of female students did. The report states that: "This gender difference is consistent with those found in other English secondary schools."

Wellbeing at School

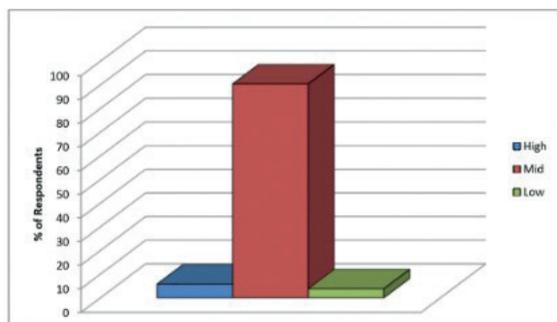


Figure 3. The % of Year 11 students reporting high, mid, and low wellbeing.

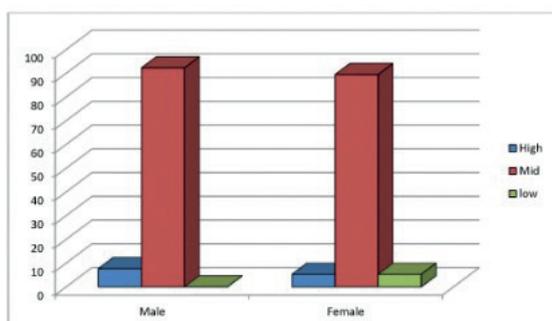


Figure 4. The % of students reporting high, mid, and low wellbeing, by gender.

Of the 14 students reporting high exam anxiety, none reported low well-being. Also, despite their anxiety, school was still perceived as a supportive environment and one that they enjoyed. These students were highlighted as those that would benefit from additional support.

It was originally planned that these students would then attend a series of STEPS workshops over six weeks, focusing on the following:

- Session 1: Recognising the signs of stress and anxiety, and understanding the effects. Understanding why students find exams stressful.
- Session 2: Understanding how feelings and behaviours are linked to our thoughts. Identifying negative automatic thoughts (NATs).

Challenging NATs and replacing them with positive self-talk.

- Session 3: Understanding the physical symptoms of stress and combatting these with the deep breathing technique and muscle relaxation.
- Session 4: Revision: Making a start; getting prepared; revision techniques.
- Session 5: Motivation: Understanding visualisation and making it work for you.
- Session 6: Exams: An overview of what you have learned; an exploration of what works for you.

However, due to unforeseen school closures and exam cancellations, the workshops did not take place. Nonetheless, the data obtained from the surveys can still provide useful information for supporting the future cohorts of GCSE classes.

Reflection and next steps

How prevalent is exam anxiety in year 11 students?

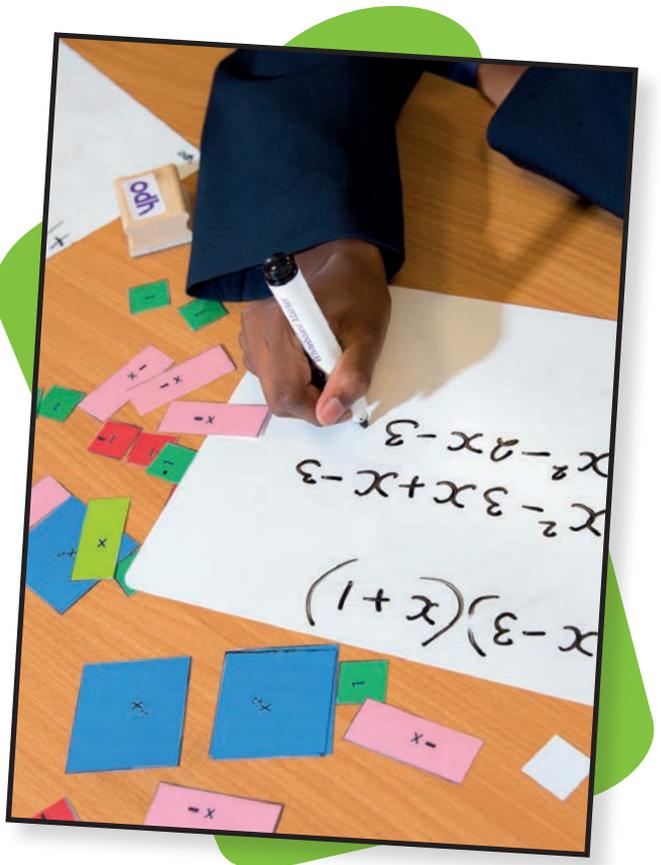
Looking at the above data, I was surprised at the high percentage of the cohort that were identified as suffering with exam anxiety. However, it is important to remember that the sample was small, and the students involved were of similar academic ability. If the study was to take place again, it may be more informative to use a larger sample so the results might be generalised across the year group. This data shows that over a quarter of the top two Maths set students were identified as suffering with exam anxiety. Further investigation would be needed to explore why these students were highlighted. It may be that these students may need higher grades to access A-level and university courses, and therefore it may seem more vital to them that they achieve high results.

The gender gap could have been a reflection of the attitudes of students toward their schoolwork. In my experience, Year 11 girls in high sets tend to be more organised and begin their revision earlier than boys.

The survey took place 12 weeks before the exams were due to begin, therefore many of the female students may already have started thinking about their revision and were experiencing symptoms of stress. Male students may not have experienced this until closer to their exams.

What can we do to support students suffering with exam anxiety?

While the workshops did not take place, a future study may be beneficial to explore their effect in tackling exam anxiety. In the meantime, perhaps if we as teachers were more aware of the signs of stress and anxiety in our students, we may be able to support them through the techniques outlined in the sessions within lessons. This is something I intend to explore in more detail with a new cohort of Year 11 students.



References and Resources

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Comparing the views of teachers and students about marking and feedback

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Context of study

Every teacher has struggled with their marking load at some point in their career and the general consensus seems to be that this stress is merely an 'occupational hazard' (McGill), but does it need to be so or are there effective ways to manage the load?

It is evident that Trinity Academy Halifax is endeavouring to alleviate the strain with the implementation of the recently updated policy: so, what do staff think of it? Are they taking full advantage of the benefits? Or is there still a sense that we are 'box ticking' in anticipation of scrutiny?

Whilst there are reams of literature published every year about effective assessment, there is comparatively little about the next steps of marking and feedback, despite it being such an integral part of the teaching profession. What is overwhelmingly apparent, however, is that ineffective marking serves no purpose, leads to low staff morale and is what makes nine out of ten teachers consider it to be 'the worst part of the job' (Bartlett).

Marked work is 'an intrinsic part of the learning process' (Bartlett) and as such student progress must be at the forefront of what we do, otherwise there is no point. Therefore, this study will primarily

give a voice to student opinions and explore what they think about different strategies, which ones they are most exposed to and which methods they deem as most useful in helping them to progress.

Secondly, the study will investigate staff perceptions of the policy, which strategies they prefer and most commonly use, and ultimately whether the views of staff and students are in line with one another.

Methods

Ten teachers and 35 students were asked to complete a survey about their Year 10 English lessons. The 35 students were a random selection taken from sets 1 to 6 on both sides of the year group; yet (as closely as possible) there are around four students from each class of the teachers who took part in the survey. Both groups were asked a series of ten corresponding questions about their marking in order to compare their responses in the following areas: importance, impact, preferences and engagement.

The ten questions focused on: how important marking is; how much marking is valued; how much of an impact it is deemed to have; what the most and least important elements of marking are; what types of marking are preferred; and whether marking is effectively engaged with.

Responses were multiple choice (largely on a scale of extremely, quite, indifferent, not very, not at all) and allowed for clear comparison of teacher and student responses in order to evaluate whether the approaches we take are effective and valued by students.

A potential impact on the accuracy of data is the fact that surveys were completed in week three of the school closure and as such both teachers and students were at a slight remove from the normal marking cycle.

Additionally, whilst encouraging students to be fully honest in their feedback, the anonymity of the student survey does not allow student groups to be taken into account, so it limits analysis of patterns in attitude toward marking which may wish to be included in further study.



Research findings:

Importance: The first four questions were directed toward the importance of marking. Whilst there were some slight variances, teachers and students were largely in agreement in this area.

Ninety percent of teachers put marking overall in the 'extremely important' category, with one opting for 'quite important.' Students were slightly less confident in their beliefs, with 80% opting for 'extremely' or 'quite' and the remaining 20% saying they were either indifferent or that they thought it was 'not really important' (one student).

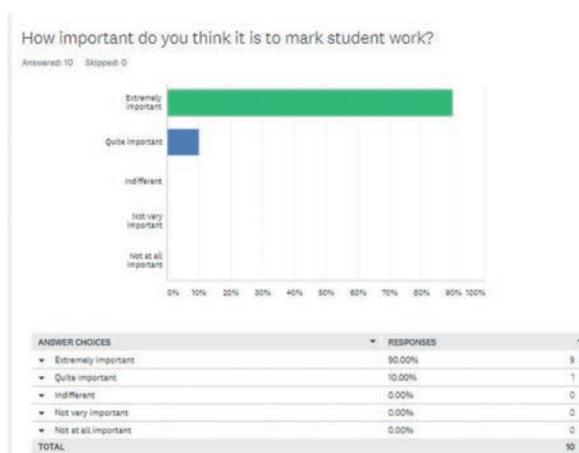


Figure 1. Teachers' responses about importance of marking.

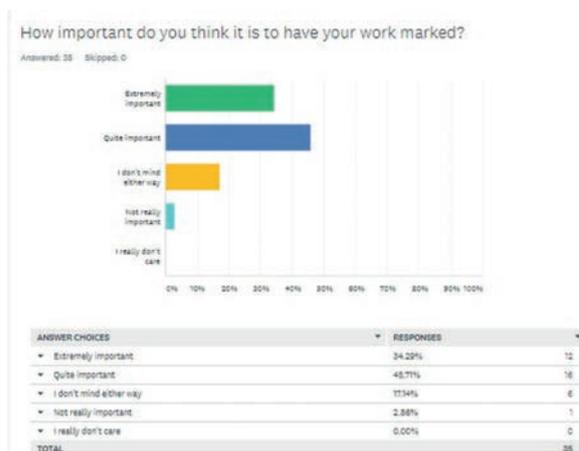


Figure 2. Students' responses about importance of marking.

Questions on the importance of different areas of marking suggest that teachers and students still remained in accordance with 'exam questions and assessments' being deemed the most valuable

and 'notes' being the least important. There were some students, however, who felt that they wanted 'everything' marked (9%) and, contrastingly, some that felt the marking of 'homework' (14%) or 'everyday classwork' (11%) was redundant.

When it came to the question on how much students value their marking and feedback, there was a slight discrepancy between staff and student views. Whilst only 20% of teachers thought students 'extremely valued' their feedback, in fact 43% of students said they did, with a further 54% saying they found it 'quite important,' which can only be to the benefit of the teacher as it reinforces that the act of marking student work is both appreciated and valued. The only anomaly here being that one student said they were 'indifferent' to the feedback.

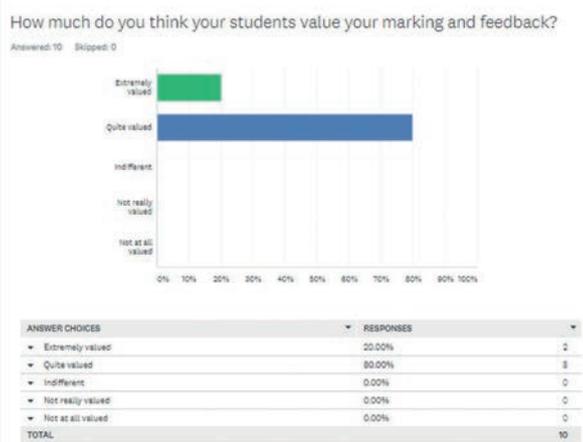


Figure 3. Teachers' responses about how much marking is valued.

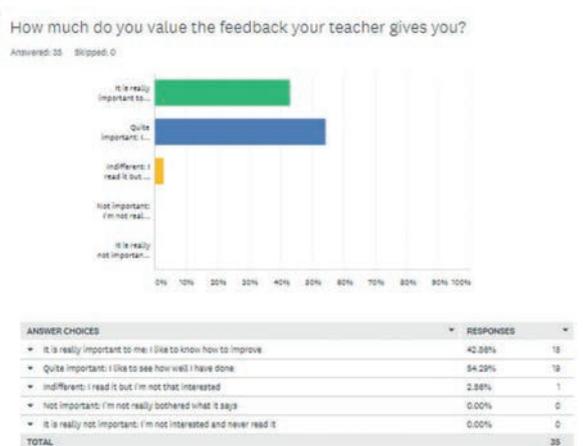


Figure 4. Students' responses about how much marking is valued.

Impact: Question 5 concerned the impact of marking and whether staff or students felt that marking work affected progress. Again, staff and student majorities felt that progress would be less if work went unmarked, yet teachers were more confident about this impact, with 90% versus 51%. A total of 37% of students and 10% of teachers were unsure whether marking impacted progress and 11% of students said that it made 'no difference.'

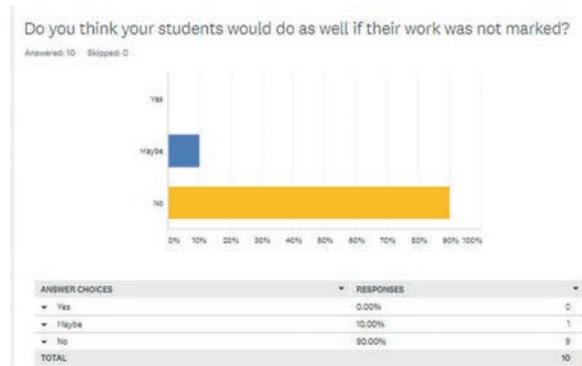


Figure 5. Teachers' responses about impact of marking.

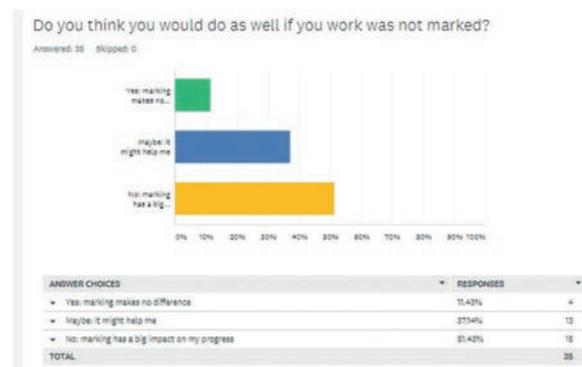


Figure 6. Students' responses about impact of marking.

Type: Questions 6 to 9 focused on the different types of marking and the elements within the feedback to establish preferences and interests.

Despite the introduction of Trinity's new and varied marking strategies, both teachers and students still favour the traditional full marking of tasks with WWWs and EBIs (What Went Well and Even Better If). Although 20% of teachers also valued the introduction of the whole-class green feedback sheet, only 9% of students concurred. Students favoured 'zonal marking' (23%) and 'student choice' (11%) feedback to the 'green sheet.'

Both teachers and students admitted that they had tried or experienced a range of marking, with 30% of teachers and 29% of students saying that the options provided on the academy policy allowed them to be 'extremely varied' in their approach and application. Worryingly, four students indicated that either their books were not marked or that the same strategy was used all the time.

Teachers were unanimous in their view that EBIs and 'error correction' are the most important features of the feedback, and 40% of students agreed. Although, perhaps unsurprisingly, the most popular view of students was that 'the grade' was the most valued piece of information they received. When it came to the least important element, all participants agreed that 'ticks and crosses' and 'stickers' are the most unnecessary part of marking despite perceptions that they may provide reinforcement or boost morale.

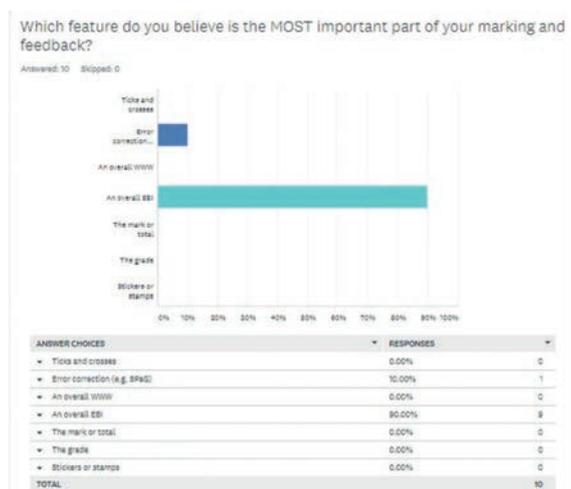


Figure 7. Most important features of feedback according to teachers.

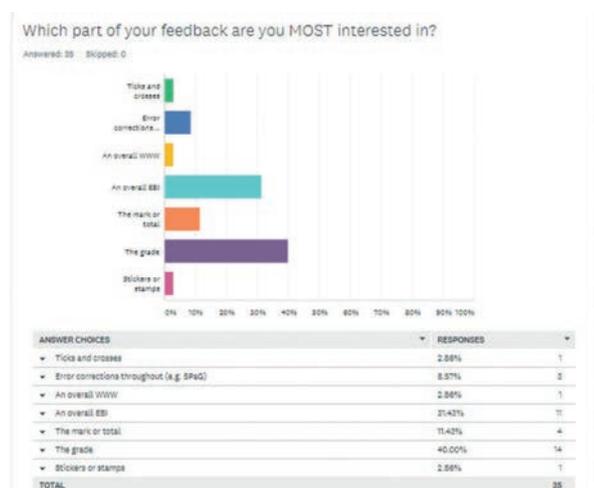


Figure 8. Most important features of feedback according to students.

Engagement: The final question asked about student interaction with their marking and the use of purple pen. Perhaps the most concerning feedback across the survey overall is that 29% of students say that they are 'indifferent' to their feedback and only engage with the purple pen tasks out of compulsion, with a further 3% suggesting that they try to avoid engaging at all. Teachers have more positive perceptions of student engagement, with only 10% saying that student interaction is less than 'effective.'

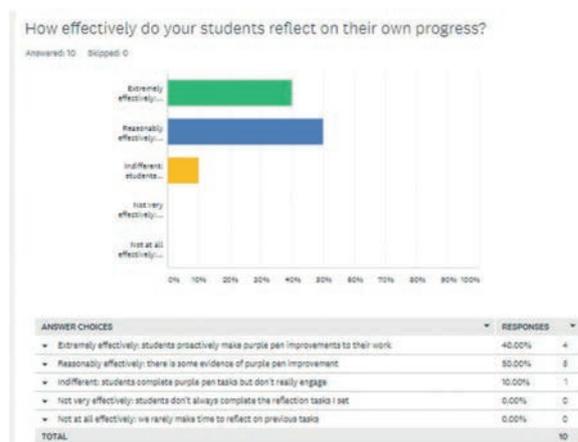


Figure 9. Teachers' responses about engagement with feedback.

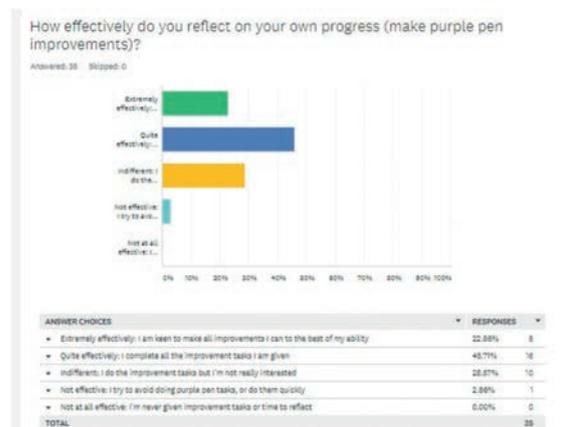


Figure 10. Students' responses about engagement with feedback.



Reflection and next steps

The use of corresponding questions asked to a range of both teachers and students made it easy to compare views and evaluate the use of the academy's Marking policy. Survey responses made it clear that student work is regularly marked using a range of strategies, that students are interested in and value the feedback they receive, and the majority feel that engagement with feedback is effective.

The feedback of question 4 seems slightly inconsistent with question 1, as students seem to 'value' the feedback they receive more than they see marking itself as 'important.' It may be suggested that students like to see how they are doing, but do not necessarily deem it to be vital to their progress. This is further indicated through the responses to question 5 where students did not always associate marking with progress, and in question 10 where purple pen work is completed out of compulsion. These findings may indicate that teachers need to better communicate with students about how and why marking can support their learning inside and outside the classroom.

The biggest differences between teacher and student preferences came from the types of marking used. This is perhaps a result of priorities as teachers can see the benefits of being able to give quick feedback to the whole class using the green sheets, whilst students evidently want more bespoke comments either about all or part of their work. It was interesting to see, however, that overall both teachers and students favour whole-task WWWs and EBIs, potentially as they give all involved a much clearer picture of student outcomes, despite the time-consuming nature of such marking. These results do, however, support the academy's Marking policy in that implementing a variety of methods allows students to receive timely and detailed marking in moderation. Combined with the views that assessment marking is the most valuable

feedback, I believe it would be fair to say that whole-task marking should be used here, and that more general methods could be applied to homework and everyday class work.

The research was overwhelmingly positive in terms of demonstrating that teacher and student perceptions are in line with one another, which is, for the most part, reassuring. The most concerning element of the study lies within the discrepancy between teacher and student perceptions of how marking and the subsequent engagement with tasks through the use of purple pen can in fact boost progress. Whilst teachers are fully cognisant of these benefits, perhaps more needs to be done in terms of assisting students to see the purpose behind such a central part of their classroom practice.





Appendix - The surveys:

TEACHER

1. How important do you think it is to mark student work?
 - Extremely important
 - Quite important
 - Indifferent
 - Not very important
 - Not important at all
2. Which of the following is it MOST important to mark?
 - Everyday class work
 - Notes
 - Exams or assessment questions
 - Homework
3. Which of the following is it LEAST important to mark?
 - Everyday class work
 - Notes
 - Exams or assessment questions
 - Homework
4. How much do you think your students value your marking and feedback?
 - Extremely valued
 - Quite valued
 - Indifferent
 - Not really valued
 - Not valued at all
5. Do you think your students would do as well if their work was not marked?
 - Yes
 - Maybe
 - No
6. What type of marking do you prefer to use?
 - Full task marking using WWW and EBI
 - Sample marking and green sheets
 - Zonal marking
 - Live model marking
 - Student requests

STUDENT

1. How important do you think it is to have your work marked?
 - Extremely important
 - Quite important
 - I don't mind either way
 - Not really important
 - I really don't care
2. Which of the following is it MOST important to you to have marked?
 - Everyday class work
 - Notes
 - Exams or assessment questions
 - Homework
 - I want everything marked
3. Which of these is it LEAST important to you to have marked?
 - Everyday class work
 - Notes
 - Exams or assessment questions
 - Homework
4. How much do you value the feedback your teacher gives you?
 - It is really important to me: I like to know how to improve
 - Quite important: I like to see how well I have done
 - Indifferent: I read it but I'm not that interested
 - Not important: I'm not really bothered what it says
 - It is really not important: I'm not interested and never read it
5. Do you think you would do as well if you work was not marked?
 - Yes: marking makes no difference
 - Maybe: it might help me
 - No: marking has a big impact on my progress
6. What type of feedback do you prefer to receive?
 - Full task marked with WWW and EBI
 - A green sheet with whole class targets
 - Detailed feedback about just part of my work
 - The teacher model marking in-front of the class/ on the board
 - Detailed feedback about something I specifically asked to be checked

TEACHER

7. Do you use a good variety of the types of marking named in the previous question?

- No, I don't use any of them
- No, I always use the same one
- Yes, I have used some of them
- Yes, I try to vary my marking as much as possible

8. Which feature do you believe is the MOST important part of your marking and feedback?

- Ticks and crosses
- Error correction (e.g. SPaG)
- An overall WWW
- An overall EBI
- The mark or total
- The grade
- Stickers or stamps

9. Which feature do you believe is the LEAST important part of your marking and feedback?

- Ticks and crosses
- Error correction (e.g. SPaG)
- An overall WWW
- An overall EBI
- The mark or total
- The grade
- Stickers or stamps

10. How effectively do your students reflect on their own progress?

- Extremely effectively: students proactively make purple pen improvements to their work
- Reasonably effectively: there is some evidence of purple pen improvement
- Indifferent: students complete purple pen tasks but don't really engage
- Not very effectively: students don't always complete the tasks I set
- Not at all effectively: we rarely make time to reflect on previous tasks

STUDENT

7. Do you see a good variety of the types of feedback mentioned in the previous question?

- No: my work is rarely marked
- No: it's always the same type of feedback
- Yes: I've had some different types of feedback
- Yes: my work is regularly marked using different types of feedback

8. Which part of your feedback are you MOST interested in?

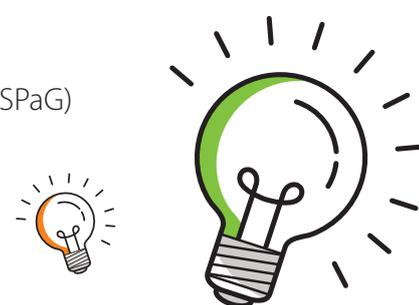
- Ticks and crosses
- Error correction (e.g. SPaG)
- An overall WWW
- An overall EBI
- The mark or total
- The grade
- Stickers or stamps

9. Which part of your feedback are you LEAST interested in?

- Ticks and crosses
- Error correction (e.g. SPaG)
- An overall WWW
- An overall EBI
- The mark or total
- The grade
- Stickers or stamps

10. How effectively do you reflect on your own progress (make purple pen improvements)?

- Extremely effectively: I am keen to make all improvements I can to the best of my ability
- Quite effectively: I complete all the improvement tasks I am given
- Indifferent: I do the tasks, but I'm not really interested
- Not effective: I try to avoid doing purple pen tasks, or do them quickly
- Not at all effective: I'm never given improvement tasks or time to reflect





Using drama and hot seating to help students understand literature texts

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Context of study

The English Literature GCSE is a challenge for many students for a variety of reasons: they do not read at home; low reading ability; problems with recall; the texts can be 'unrelatable'; they find it 'boring'; parents do not see a value in it; and finally, the sheer amount of learning/memorising they need to do. As an English teacher, this can be a challenge, but, as a school, we have come up with some strategies to try to combat these issues:

- Providing students with a knowledge organiser for each text
- Providing students with revision guides
- Weekly recall quizzes
- Homework based on exam questions
- Homework to support learning of quotations and analysis
- Spaced repetition within lessons

However, we also need to develop a love of learning and a love of the texts so that the students are equipped with the necessary tools, not just to complete their exam successfully and to the best of their ability, but so that they have the passion

and tools to develop a life-long love of literature and learning. As a teacher, or as teachers, we want students to love our subject, to continue with it beyond the classroom, and beyond their 16 years of learning; it is this that I am trying to achieve alongside the need for retention, recall and writers' intentions.

I teach a Year 11 group who are targeted level 6–7s; the class has an unusual gender split for a higher ability group of eight girls and 13 boys. Whilst this might equate to a 40/60 ratio of girls to boys, for me, this is unusual, as the equivalent class in the other band has 22 girls to five boys. Even the set below, on the opposite band, has 14 girls to ten boys – all sets of a similar ability student favour a girl-heavy group. A reason for noting the gender split is that I am looking to incorporate drama and performance into my lessons, and the Performing Arts subjects are typically selected by female students, and boys are less likely to be engaged by this. Luckily, I have taught my class for two years and I know the students very well; they are amenable and resilient – and willing to try anything. A caveat here: there is likely to be some 'grunts and groans' but I want to build their confidence, knowledge and resilience when it comes to the texts, and one way I could do this is by bringing 'literature to life.'

I knew my class struggled with two texts: A Christmas Carol by Charles Dickens and Macbeth by William Shakespeare. I was looking to ascertain what approach would best aid their understanding and retention of the texts, focusing on plot, characters and themes. More importantly, I found the following are two key areas that I need to address:

1. Students too often see a character as a real person – they need to understand they are constructs.
2. Students only look at the extract from Macbeth/A Christmas Carol as a piece of text; they forget to use their wider knowledge of the play/novella, often because they cannot relate to the events.

Therefore, I wanted to explore whether increasing students' empathy for a character helps them to make sense of the key events. The zone of proximal development refers to the difference between what a learner can do without help and what he or she can achieve with guidance and encouragement from a skilled partner (Vygotsky). In providing students with support, I am hoping to develop their confidence and knowledge, and gradually remove the scaffolds that have been in place. After reading an article about the use of drama as an effective classroom tool, I hope to use drama as a scaffold to develop students' empathy and increase their knowledge and understanding of the texts before removing the scaffolds (Devlin, 2013).

The research was guided by two questions:

- Does using drama in the classroom support students with their understanding of a literature text?
- Does 'hot seating' help students to understand and explain a writer's intentions?

Methods

The English curriculum for Years 10 and 11 is designed so that all of the Literature texts are taught in Year 10 and revised in Year 11. The reason I selected to investigate, in January, whether drama would have an impact, is because the November mock results demonstrated Literature was a weakness for my class, despite studying the texts for a year already.

I knew I was going to be focusing my investigation on A Christmas Carol and Macbeth, as the results for the students on these texts were similar. But, to ascertain whether drama had an impact on the results, I needed to teach the two topics slightly differently to be able to compare the results. I therefore decided to re-teach/revise A Christmas Carol using traditional methods and make Macbeth my drama-based texts; this is also because Macbeth is a play and it is designed to be performed.

Due to the nature of our curriculum design, I had two weeks to teach/revise each topic before the students were tested on that topic with a GCSE question. This was non-negotiable. All students in the year group sit the same test, at the same time – and we, as teachers, did not see the tests until the day, so I had no idea what students would be assessed on.

I mentioned above that my class are amiable, but they are also very vocal – and one of their main concerns after the November mocks was that they "didn't know A Christmas Carol at all." This was a perfect opportunity to re-teach the text and really focus on extracts, exploring characterisation and thematic links throughout the text. I designed a booklet that took them step by step through each stave (chapter) of the text; it made links to previous events and included model responses. It was designed to be a detailed revision guide once we had completed it in class.

The tasks included:

- Fill in the blanks whole plot summary
- Questions on how themes are explored
- Links to context – and models of how to link context to an exam response
- Questions on the narrator/narration style
- Extracts to annotate
- Sample model answers
- Model answers to complete
- Comparison of the changes of character in the novella

I designed a PowerPoint to go alongside, although I did not always use it, and the lessons were very structured: I asked the students questions; they shared ideas; they wrote down the key ideas; they annotated the extracts; they fed back their ideas; we modelled on the board. Overall, I led the learning through modelling and they then completed the tasks I had designed. We worked as a class at a similar pace, peer-assessing responses throughout.

At the end of their two weeks, they sat the assessment: a GCSE question with an extract to analyse. The results ranged from level 3–8; quite a mixture and still a bit disappointing. I had spent hours designing what I thought was a great revision booklet, but it still didn't have the desired outcome. The next two weeks on Macbeth had to be different.

Luckily, as a department we had arranged for a theatre company to come in and deliver a live version of Macbeth followed by a workshop – and this was a perfect way to tailor my lessons to include drama and hot seating, to explore and cement understanding of characterisation, themes, context and plot.

I was conscious that I needed to scaffold this carefully, otherwise the students would not want to participate. I introduced Macbeth in a similar way to A Christmas Carol, starting with plot recall, making

links between characters and themes using mini-whiteboards (MWBs) and paired activities. I then selected to explore a scene from the beginning of the play where the witches were introduced; I asked the students to create a circle and they had to act out the background noises (thunder and lightning) by clapping their hands and stomping their feet, whilst I acted out the rest of the scene. We discussed the impacts of the sounds on the audience and considered ways we could create the play without modern technology. Students were then asked to work in groups of their choice to re-create the scene and the sound effects; they had a script and should read the lines, but they didn't have to act it out specifically – nor perform it to the class – I would just question the students whilst walking round.

That's how I introduced an element of drama to the lessons, and to begin with I wanted to be consistent and ensure everyone felt comfortable participating, so I kept the next few lessons similar. I selected a scene, asked students to create the background noise, modelled the performance, then asked them to replicate in groups whilst I wandered round questioning the students. But, for the students to really understand the characters, they needed to be the character and understand the character's background/emotions/personal context etc. I told the students I was going to be Lady Macbeth and asked them to create two questions each that they would like to ask the character about her role in the play. I sat on a chair at the front of the classroom, and all the students' questions were placed in a tray that went around the room for different students to ask. I took on the role of the character – modelling responses – and then I asked for any volunteers to come and take on Lady Macbeth's character and answer the questions. Five students volunteered, so they took it in turns. I used the same structure again for the character of Macbeth the following lesson: modelling and volunteers.

Before I removed all the scaffolds, the theatre company came in and performed to the whole of Year 11 (half a year group at a time) and used the

students as part of their performance. Some of the students from my class volunteered, and some were chosen to be involved in this performance. The theatre company were brilliant and showcased a range of different character mindsets and discussed the impact of staging with students.

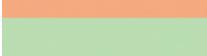
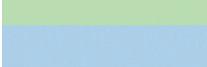
In my final lesson, before the assessment, the students set up the classroom similar to a courtroom and put four characters on trial. The students themselves came up with the questions to be asked (placed in a tray again) and four students were chosen (they decided as a group who would go first) to be on trial as characters. One student led the trial and asked other students, as audience members, to pick questions to ask. They rotated the characters on trial so that nearly everyone got a chance to be involved. Whilst I had suggested the idea of the trial, my input here was minimal – I had removed any elements of modelling, guidance and comfort I had provided at the start of the period – and the students were able to design the hot-seating activity for themselves. It really showcased their ability to consider a character’s mindset and why the writer would create a character in that way. They made links to the context of the play and the themes throughout – it was a proud teacher moment! The following day, the students sat their assessment.



Research findings

The table below shows the results the students achieved after the two assessments. I have only showcased the results of 16 students; this is because not all students sat both assessments. I wanted to include the results where I could draw a direct comparison.

Student	A Christmas Carol /30	Level U-9	Macbeth /30	SSPS /4	Total	Level U-9
1	17	5	21	2	23	6
2	16	5	18	3	21	6
3	18	5	17	2	19	5
4	15	4	15	2	17	4
5	18	5	19	3	22	6
6	17	5	17	3	20	5
7	18	5	16	2	18	5
8	24	8	23	2	25	7
9	19	6	19	2	21	6
10	17	5	18	3	21	6
11	17	5	18	2	20	5
12	12	3	19	2	21	6
13	21	6	19	3	22	6
14	19	6	21	2	23	6
15	18	5	22	2	24	7
16	16	5	21	3	24	7

Code		Achieved above previous score
		Achieved below previous score
		Overall positive change to grade
		Overall negative change to grade



Below I have summarised my key findings:

- Nine students achieved above their previous score on the Macbeth assessment.
- Four students achieved below their previous score on the Macbeth assessment.
- Seven students saw a positive change in an overall grade after sitting the Macbeth assessment. The extra marks for SSPS are accounted for as the grade boundaries change in reflection.
- One student saw a negative change in grade after sitting the Macbeth assessment.
- Three students saw no difference.

Overall, the results for the Macbeth assessment appear more positive, especially when nine students achieved a higher mark, and seven students out of 16 saw a positive overall change in their grade.

Reflection and next steps

Looking at the data above, it is tempting to suggest that the hot seating and inclusion of drama made the positive impact on the students' grades; that the incorporation of these events has enabled students to think harder about all elements of the text and understand the writer's intentions and use of characterisation.

However, the inclusion of the theatre company no doubt had an impact on the students and what they have produced. I said myself that they were brilliant, and I think watching the play performance really allows students to understand the play as a whole. Did this performance make it more memorable? Did the fact that the students then wanted to replicate this as a courtroom piece help? Or was it that students sat this test two weeks after the A Christmas Carol assessment, and they had received feedback on how to improve? All these factors could have influenced the change in grade and the increase in student performance. We, as teachers, know that students' performances increase over time – has time been a factor here?

Whilst I think an array of the factors above could have influenced the grades achieved, the students were excited to perform the play; they enjoyed taking on the roles of the characters

and having to consider how they would create the stage performance with no resources. Each of the activities enabled the students to enjoy Macbeth and that was one of my aims, so perhaps enjoyment has increased the attainment of the students. For me, moving forward, I want to incorporate more drama, role play and hot seating, to develop a passion for literature, alongside a greater awareness of plot, characterisation, themes and writers' intentions. If they can get into the mindset of the writer, as well as the characters, it will enable them to piece together the thought process behind a whole text.

It is worth noting that, statistically, there's not a huge difference between the two sets of results. The average score for A Christmas Carol is 17.7 and the average score for Macbeth is 18.9. I mentioned above that my sample of data was reduced, and this has made an impact on the results I have produced. It is quite difficult as a classroom teacher to produce the data to prove that drama can increase the attainment of students. Even so, the results have shown that students did, on average, increase their performance, and so whatever factors may have contributed to this – drama did help, and the students' attainment increased. I would suggest that this is a positive – for me anyway.





Has specialist Secondary Science CPD contributed to the success and confidence in the delivery of Primary Science?

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Context of study

The way in which science is taught in primary schools has a big impact on the starting points and the underlying science misconceptions that students have when they are in secondary school.¹ Quite often their first exposure to science can have a resonance throughout a student's journey through the curriculum. Their first experiences can sometimes be linked to their perceptions of enjoyment of the subject and could lead on to their future decisions for career choices. The aim of working with primary teachers in surrounding areas to Trinity Academy Halifax (TAH) is to try to ensure that students have a similar experience and opportunity with science, and hopefully ensure that students arrive at TAH with a similar starting point.

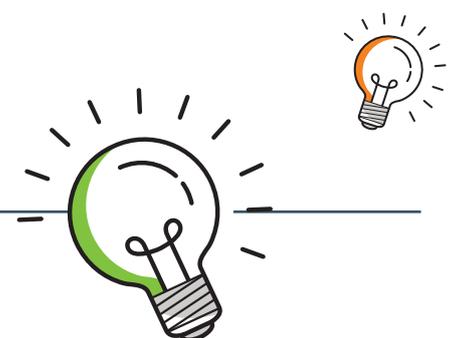
From previous audits in 2018, it became apparent that students at some local primary schools were not experiencing the same delivery and opportunities within science. This was due to a variety of reasons, such as higher-level teaching assistants (HLTAs) delivering the hour session of science, staff unsure of how to deliver content and availability of practical equipment. The main concern from feedback was the confidence level of staff to deliver science content.

Due to this feedback, staff were invited to a twilight CPD session: the Primary Science Hub. The aim of the Primary Science Hub is to improve staff confidence in delivering science content and practical activities; initially with easily accessible resources that primary staff could use but also with the offer of loaning equipment from TAH where appropriate.

A report by the CFE (2017) states in their research that just under a third of teachers at primary schools (across the UK) had not received any support/CPD in science, and their confidence levels in delivering and assessing science were only increased if, for example, they were in a school with a Science Leader or through the level of experience as a teacher (p.21).² The lack of appropriate equipment is also reiterated through this research, and whilst school budgets will limit further purchasing of equipment, the ideas delivered in the Primary Science Hub through 'Takeaway Science' concepts, will enable staff to use everyday materials.

¹<http://www.leeds.ac.uk/educol/documents/00003337.htm>

²<https://wellcome.ac.uk/sites/default/files/state-of-the-nation-report-of-uk-science-education.pdf>



Method

There were eight local primary schools invited to Primary Science Hub 1, and five schools attended the session. Through the verbal and emailed invitation, staff were asked to provide any information about the aspects of the Science curriculum that they would be teaching next, and therefore need support on, however, this was left quite open. Initially, this may have been due to not knowing where they required support the most.

The ASE discuss the different types of scientific enquiry below, and for Primary Hub 1 it was decided that it would be more efficient to only focus on a few of these enquiry skills: noticing patterns, grouping and classifying things, and modelling.

- Observing changes over time
- Noticing patterns
- Grouping and classifying things (noticing similarities and differences)
- Comparative and fair testing
- Finding things out using secondary sources of information (researching)
- Modelling (not explicitly mentioned but will be used)³

It was decided that the comparative and fair testing skill may be one that primary teachers are more comfortable with, however, the terminology of variables was discussed. Based on the Science curriculum at Key Stages 1 and 2, it was then decided that Animals (including Humans), Sound and Light, and States of Matter and Everyday Materials were covered across both Key Stages and would therefore benefit a range of staff at Primary Hub 1.

Primary Hub 1 commenced with a confidence line to gain insight into how staff ranked themselves before delivery. The initial feedback was that there was a range of confidence levels from the attendees.

Three sessions were delivered on Session 1 'Measuring Pulse Rate After Exercise', Session 2 'Properties of Materials' – which focused on dissolving and separating materials, and Session 3 'Sound and Light Investigations.' Within each of the three sessions the focus was on ideas for practical investigations, with equipment and health and safety aspects, modelling science concepts and planning sheets. The final session then gave some 'Takeaway Science' ideas, which colleagues could easily resource themselves, with clear step-by-step methods. All the sessions were referenced with information on how to carry out any of the ideas included and clear links were made to year groups in Key Stages 1 and 2 that match the national curriculum. Attendees were then given time at the end of the session to take any of the ideas discussed and use a planning sheet to develop their ideas with the following sub-headings:

- Practical idea/Year group/Link to theme
- Planning
- Results
- Conclusion (see Appendix 1)



Research findings

A follow-up questionnaire using Survey Monkey was sent to the attendees; three responses were received (see Appendix 2). One hundred percent of the responses show that the staff felt more confident after attending Primary Science Hub; it was an effective way of gaining more ideas to deliver the Science curriculum and appreciated

³<https://www.ase.org.uk/system/files/Scientific%20Enquiry%20in%20the%20UK%20V2.pdf>

the opportunity of working with staff at TAH. In addition to this, all responses showed that staff would welcome the opportunity to attend further workshops in the future and found the 'Takeaway Science' ideas useful.

Due to this feedback, Primary Science Hub 2 has been planned to cover Materials and their Properties, Minibeasts, Adaptation, Plants, Evolution and Animals based on suggestions from primary staff. All the content will be much more provision-based to allow staff to circulate and focus on the areas that they think will benefit their students, in an activity-circus-style session as opposed to the initial didactic approach that was offered in Primary Hub 1.

After Primary Hub 1, one primary school requested some further bespoke on-site CPD and loaned equipment from TAH, which supports the intention of Primary Hub sessions in allowing staff to source equipment, open up dialogue and build confidence.

The number of attending schools may have been lower than preferred due to difficulties in coordinating calendars and clashes with other events, such as staff meetings. The second event has had a higher volume of participants interested, with individual schools intending to attend as a full teaching staff body. This will be beneficial for primary schools to then communicate their experiences after each event and allow for bespoke CPD to be delivered at each session, once feedback is shared with TAH.

TAH Science teaching staff will also benefit from full school participation as it will then give an insight into the learning that takes place in primary schools. It will allow the curriculum planning to use dialogue that students are familiar with from their feeder schools, such as the themes that they may have been working on. This will benefit students' learning as they will have the spaced repetition and reminders of scientific language, practical activities and investigations,

and understanding of key concepts (Golden threads – forces, cells, energy, particles and interdependence) that can be built upon in their five-year Science curriculum at TAH.

Reflection and next steps

In the interest of allowing more primary schools to participate, it may be beneficial if these dates were pre-planned at the start of the academic year and advertised in advance to boost awareness. An ideal opportunity for some primary schools to attend a Primary Hub may be during the Year 6 transition to TAH which begins in the summer term.

A suggestion would be for primary staff to be invited to observe some Phase One Science lessons at TAH and open up an opportunity for some long-term projects or links with Science Club. These opportunities will be beneficial for students transitioning to TAH as they will be familiar with the academy building, the staff and students.

Further sessions within the Primary Hub will also allow primary staff to become more familiar with science equipment that they may not have used before and therefore further opportunities for loaning equipment.

Additional steps for the Primary Hub may also include addressing misconceptions within science knowledge that are often seen as a fundamental issue at GCSE level, which could be rectified at an earlier stage at primary school.

Overall, specialist Secondary Science CPD has contributed to the success and confidence in the delivery of Primary Science, however, the Primary Science Hub will allow a much more synergistic relationship as a continuous development and a more frequent event.



⁴<http://www.leeds.ac.uk/educol/documents/00003337.htm>



Appendices

1.

How can I separate these items?

- Salt water
- Paper clips
- Rice
- Dried beans
- Flour
- Filter paper
- Hair dryer
- Tweezers
- Sieve

4 mixtures to separate

- Salt water
- Flour / dried beans / rice
- Filter coffee in water
- Paper clips + non-metallic metal

Planning

Mixture	How do I separate it?	Was it successful?	What did that tell me?
Salt water			
Flour/dried beans/rice			

Results

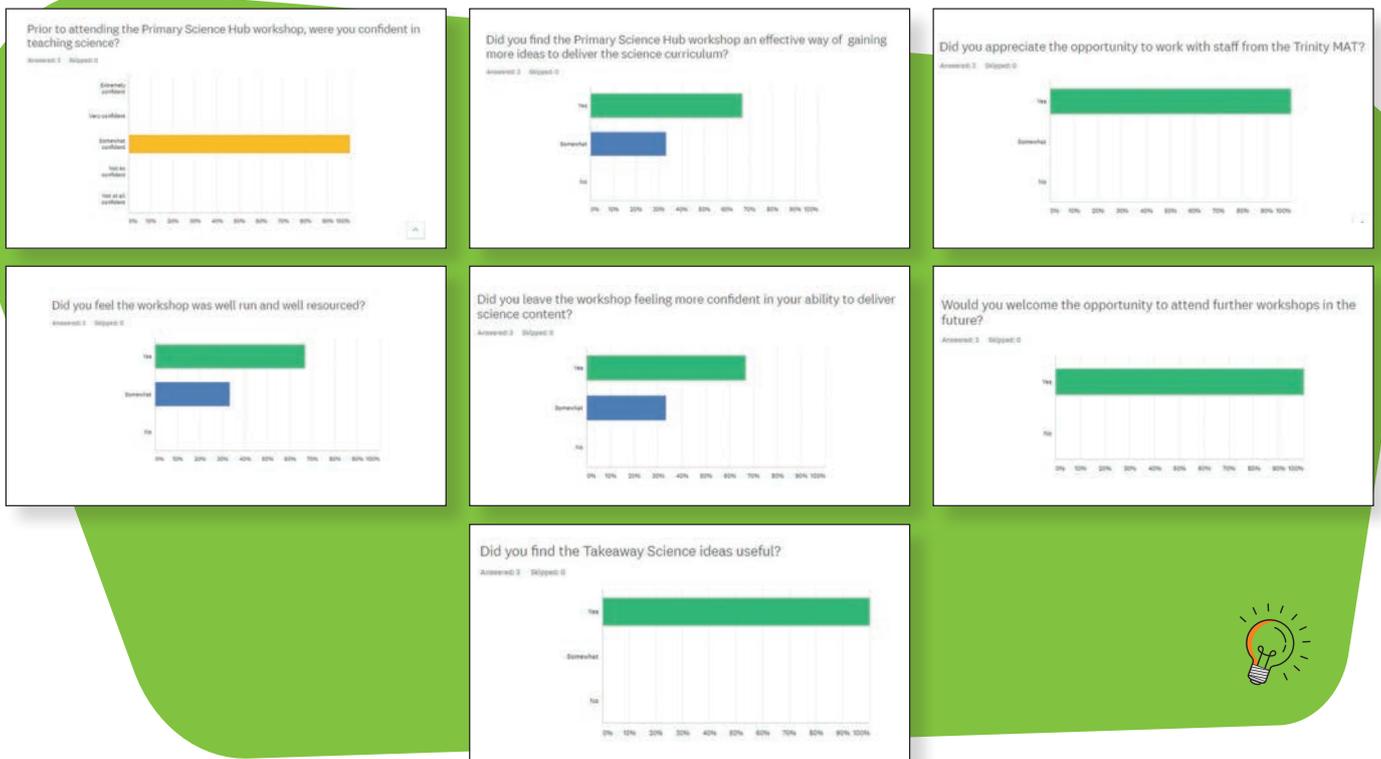
Mixture	How will we separate it?

Conclusion

Materials that are _____ can be separated by _____.

The salt in the water is _____ this is it _____ in water. We separated the material by _____ it. Evaporation _____ the water which turns into _____ You are left with the _____

2.





What impact does behaviour and attitude have on Year 7 Science progress and attainment?

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Context of study

To what extent does behaviour impact on academic performance? Does poor behaviour always lead to lower academic performance? Does excellent behaviour guarantee high academic success? To what extent does perceived attitude toward learning impact on progress over time?

As teachers and educators, these are questions I feel we think we know the answers to; but to what extent does data support our opinions? In addition, what steps do we need to put in place to secure the best outcomes for our students?

From the Journal of Educational Research, Lee explores 'The relationship between student engagement and academic performance: Is it a myth or reality?' (Lee, 2014). Within this article, Lee reviews the work of previous researchers to question whether students with higher levels of emotional engagement display higher levels of behavioural engagement and whether this led to higher reading scores. Following both comparisons in reading scores and student interviews they found that when students feel that they belong to school, they want to make more effort and persevere in learning activities

that are valued by teachers and schools. "As a consequence, they are likely to perform better academically" (Lee, 2014).

However, in another study (Lee, 2014), it was evidenced that emotional engagement was not only directly related to learning but also indirectly related to learning through behavioural engagement.

Their findings were consistent with other studies that reported significant relationships between student engagement and student outcomes (e.g. Christenson, Reschly and Wylie, 2012; Reyes, Brackett, Rivers, White and Salovey, 2012). These findings suggest that educational interventions can target student engagement as an outcome that leads to enhanced academic performance.

Lee states: "An important point to note is that individual and family background variables (e.g. intelligence and socioeconomic status) are significant predictors of academic achievement and other student outcomes; however, teachers and schools have no control or limited capacities to influence these. Given the relative ease with change and the positive relationships with

student outcomes, student engagement should receive more attention from educators and practitioners who design and implement various interventions at school” (2014).

Marks (2000) found that students were more engaged in learning when they were involved in meaningful academic experiences in their classes (i.e. authentic instructional work). The authentic instructional work included being asked interesting questions, digging deeply into understanding a single topic, applying the subject to problems in life outside of school and discussing ideas with the teacher or students.

Teachers can support students academically and socially (Wang and Holcombe, 2010), and both are found to be significantly related to emotional and behavioural engagement at school (Lee, 2011; Wang and Holcombe, 2010). It is suggested that students are more likely to feel ‘belonging’ to their school and make more effort in learning when teachers establish supportive relationships with students and hold high expectations for all students, regardless of their academic standings (Lee, 2012). Marks (2000) also found that social support from various sources (e.g. teachers, parents, peers) significantly impacted on student engagement, defined as attentiveness, lack of boredom and completion of work.

However, under the accountability system, where school quality is largely determined by standardised test scores and where teachers do not spend enough time on other aspects of student development (e.g. behavioural, emotional), the heavy emphasis is on test scores (Lee, 2014). The relationship between student engagement and academic performance could generate unintended longer-term negative consequences. For instance, Wang and Holcombe (2010) found that a competitive environment decreased student participation and undermined a sense of belonging. The competitive environment derived from test-oriented learning could lower student engagement and could negatively influence academic performance (Lee, 2014).

With this evidence in mind, the aim of this study was to compare and measure the impact of poor and excellent engagement on academic performance in Year 7 Science. In addition, to compare the perceived students’ attitudes toward learning on academic performance. It then lends to the questions around what successful interventions we can put in place to support students to model high levels of engagement and promote better academic outcomes in Science. In essence, to be effective educators what do we need to consider as our next steps when we have collated and considered the impact of the evidence we collect?



Methods

Two controlled assessments were set to all the Year 7 cohort (330 students) in November and March. The assessments were identical for all students and sat within controlled test conditions. Student performance was measured as a percentage score for each individual student. The highest percentages represented the highest academic performance and lowest percentages represented poorest performance. Some students were absent from one or both of the assessments and their data has not been included in the study.

Data was then collated from the teaching staff of each student to measure their attitude to learning perceived score. A standardisation meeting with all Science staff took place to ensure the perimeters of the 1–4 scale were clear to all staff. Here, a 4* represented excellent application; a student that consistently goes above and beyond the expectations set by a member of staff within the lesson; 1* where a student's efforts were consistently poor, they did not participate in activities expected by staff, and their behaviour and attitude hinders their progress and the progress of others. It is important to state that this is a holistic measure by different individual staff members.

In addition, the total behaviour and achievement points for each individual student were collected at the end of the study. Behaviour points are issued where a student has either failed to complete a piece of work to an adequate standard, missed a homework deadline or not completed a piece of homework to an adequate standard. In addition, behaviour points are awarded whether students have been off task, either not following an instruction, talking over the top of a student or teaching staff, or could be awarded as multiple points where a student has displayed very poor behaviour: answering back, practising unsafe behaviour or had to be removed from Science. It is important to state that these behaviour points were a measure of general behaviour in school and not Science specific. However, they can be used

as a specific measure of the students' attitude and engagement within school.

In contrast, achievement points are awarded for a student that is consistently following all the expectations and completing all tasks within a lesson, going above and beyond in a specific lesson, answering questions well in class or completing a homework task to a high standard. Although the awarding of these points should be consistent in line with the Behaviour policy, it may be slightly different from one classroom to another. Again, it is important to state that the achievement points were not specific to Science but again supported the measure of the attitude to learning judgement of the student.

A comparison was made comparing the average percentage score for students in assessments one (November) and two (March) for those students with poor engagement, students attaining 100 or more behaviour points throughout the year, to those students that attained between zero and nine behaviour points throughout the year as good or better engagement, and those attaining a maximum of two behaviour points.

In addition, a holistic measure of attitude to learning was measured compared to academic performance, whereby students with an attitude to learning score of 1 or 2*, representing a poor attitude to learning, were compared to the students attaining 4* for their attitude to learning, representing a consistent outstanding attitude toward their schoolwork.



Research findings

Student perimeters	Number of students	Range of % attained on Test 1 (%)	Range of % attained on Test 2 (%)	Mean % score Test 1 (%)	Mean % score Test 2 (%)	Mean % test score (1 and 2) (%)
100≥ behaviour points (poor attitude to learning)	26	5 – 74	5 – 65	31.76	27.81	29.79
Behaviour points ≤ 9 (Excellent and good attitude to learning)	170	16 – 88	15 – 88	57.53	53.19	55.36
Behaviour points ≤ 2 (excellent attitude to learning)	82	18 - 88	15 - 83	59.32	56.09	57.71
Attitude to learning score 1 or 2* (poor attitude to learning)	21 (Test 1) 48 (Test 2)	14 - 72	13 - 78	42.95	35.70	39.32
Attitude to learning score 4* (excellent attitude to learning)	41 (Test 1) 53 (Test 2)	40 - 88	11 - 82	65.22	55.17	60.20

The findings reveal that students performed significantly better in Science assessments if their engagement is better using the two measures. Comparing the performance of students with 100 or more behaviour points to those attaining two or less, students with minimal behaviour points attained on average a 27.92% higher score compared to those students who were attaining high behaviour points. When comparing the

holistic measure of average application, a student with an attitude to learning score of 4* attained a 20.88% higher score than those students with an attitude to learning score of 1 or 2*.

In conclusion, in Science, if students apply themselves better, they significantly outperform those students that do not.



Reflections and next steps

The results did not take into account the attendance of those students taking part in the study or external factors, such as socioeconomic background and scaled Key Stage 2 scores as a measure of prior attainment.

It was also noted that there was a wide range of scores for student attainment within each set parameter, ranging from 21 to 170, which could vary the validity of the data, but also suggests that students within each parameter were not limited to a certain ability group.

Before considering the next steps, it is important to consider the research of other projects. Revisiting Lee's study, which found that, under the accountability system where school quality is largely determined by standardised test scores, teachers may not afford to spend enough time on other aspects of student development (e.g. behavioural, emotional), the heavy emphasis given to test scores could result in unintended longer-term negative consequences. For instance, Wang and Holcombe (2010) found that a competitive environment decreased student participation. The competitive environment derived from test-oriented learning could lead to lower student engagement and therefore have a negative influence on academic performance (Lee, 2014).

However, supporting students academically and socially (Wang and Holcombe, 2010) are both found to be significantly related to emotional and behavioural engagement at school (Lee, 2011; Wang and Holcombe, 2010). It is suggested that students are more likely to feel a belonging to their school and make more effort in learning when teachers establish supportive relationships with students and hold high expectations for all students, regardless of their academic standings (Lee, 2012). Marks (2000) also found that social support from various sources (e.g. teachers, parents, peers) significantly enhanced student engagement.

Hence, schools that promote student engagement by providing effective teaching and

creating a positive social environment will lead to better outcomes. However, they must also consider not putting an overarching emphasis on competitive test score results.

Therefore, the findings above are important to share with students on a holistic level as a message to students is that the "high levels of engagement lead to more positive academic outcomes." However, this impact will only be achieved if the teacher instils a meaningful, purposeful learning environment with strong teacher–student relationships. This will allow students to flourish and succeed academically.

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A research study into the impact of visual aids to improve recall

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- **Do visual clues improve memory retention and help students to accurately retain key information for their English Literature examinations?**

Context of study:

The English GCSE specification remains as challenging as ever, increasingly presenting itself as a test of time as much as an assessment of knowledge and application. Students must sit four exams having studied 15 poems and three core texts, to then be presented in the examination with two further ones which are unseen. Students need to ensure they have a full understanding of the key texts studied, which largely consists of them remembering key events, plot structures and quotations. With this in mind, I am keen to research what we can implement into our teaching practice to support students with this skill, hopefully finding a strategy to make recall easier. Specifically, I have chosen to experiment with the use of visuals to see if using these as prompts enables students to access their pre-taught knowledge quicker and more precisely. It is important to note, however, that while previous Visual, Auditory, and Kinesthetic (VAK) approaches to teaching have been somewhat rebuked over the last few years, there

are still theories that suggest ways that visual methods can support learning and memory.

Our brain is the most complex organ in the body. Some hold the view that its 'wrinkles' increase as we learn something new. This is – unfortunately, some may say – a myth. However, our brain does change as we learn new information as it forms more neural connections between its different parts through stimulation: "Learning is a physical process in which new knowledge is represented by new brain cell connections."¹ Ultimately, the more we practise a task or skill, the stronger these connections become, so retrieval actually creates learning and allows for more knowledge to be stored in the long-term memory. Linking this to the idea of visual prompts, according to the psychological theory of the 'Picture Superiority Effect', our brain is programmed to remember pictures more easily than words,² hence why images are the predominant feature in advertising campaigns. I therefore don't anticipate that having visuals as a stimulus will be additional learning for the students. However, processing images and

¹<https://www.td.org/magazines/td-magazine/inside-the-learning-brain>

²<https://www.mysimpleshow.com/picture-superiority-effect/>

recalling information are two different skills. One interesting neuroscience journal claims that: "Visual stimulation during a retrieval effort disrupts the recollection of details about a prior experience"³ which suggests that using a visual stimulus to recall can be disruptive. It will therefore be very interesting to see if using visual aids promotes effective recall in learning or if they act as a barrier for information retrieval.

Process/methodology:

Given the direct link to students' GCSE studies, I decided to use my Year 11 class of 13 students. From looking at assessment and mock exam results, it is very clear that Literature is the weaker area, especially when an assessment is interleaved alongside Language teaching, so the information needed (i.e. the quotes) isn't necessarily at the front of students' minds. In addition, this also demonstrates that revision is potentially an issue for these students, whether being because they struggle with how to revise effectively, or whether it's a simple case of they don't bother to! If it is the latter, I expect that some of this is because it can be seen as a challenging process. After all, to revise is a skill. This therefore brings me back to the aims of the project: to find a method to support both quote recall and to aid revision.

Firstly, I chose a text on the AQA specification which requires students to remember a key number of quotes in advance: *Blood Brothers*. This text falls on the exam paper which is the most heavily weighted, and the only question where some form of text isn't provided as a scaffold. It therefore seemed perfect!

To help with the skill of recalling, I chose to use illustrations which were linked to key quotes; I suppose this makes sense given that what students see is a trigger for a very specific memory, or in this case, a specific textual reference. In order to determine if using a visual aid does help, I chose 12 quotations and gave six of them associated images. In addition,

I made sure that there was a mixture of quotations which we often cover together as a class, and some newer ones – ones which students were familiar with but perhaps those which we don't refer to as much in lessons. I also deliberately selected quotations which I felt my students could 'explore' in line with the assessment objectives, as it won't help students to be successful in this exam if they were recalling quotations which they couldn't analyse. I ensured the images were simple to hopefully prevent students finding it an additional memory challenge.

As my group are very used to weekly special repetition tests, I chose to use this regular slot as the perfect time to test them. I introduced students to the first six quotations – with images – and gave them a week to learn them. On the day of the test, I gave the students the six images, without the quotations, as homework and gave them the same amount of time to remember them. When I tested the group for the second time, it was purely on the recall of the second set of quotes. The week after this, I then tested the students on how many they could remember in total, as I was interested to see whether the quotations with images were recalled the most. In the week leading up to this final retrieval test, students were given time to learn all 12.

In order to limit my variables, I used the same Literature text and gave students the same amount of time each week to learn them. In addition, as this formed part of my spatial repetition testing, I continued to cover other Literature texts in my lessons, so the text students were being tested on was not referred to. This also meant that any student absence didn't affect the results. I also have a strict seating plan, so students were in the same places for each test and there were no influences around them! The tests took place at the same time each week (Monday, period 1) and were conducted under exam conditions. Students added in those they didn't remember with their purple pens so they could see if they improved their score next time. The aim was to conduct this across a

³<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2919837/>

nine-week period, so a set of three tests were to be completed three times. I also wanted to make sure that we were studying Language in class, so the quotation recall formed part of Literature revision, which should have been students' homework.

Research findings:

As presented in Appendix A, the following results were noticed, having conducted three tests in total due to Covid-19:

- 54% of students remembered more written quotations than those with accompanying images across the tests.
- 15% of students recalled the exact same number of quotations each time, so there was no difference.
- 16% of students scored higher on the first test.

Regarding the third test, where students had to write down as many quotations as they could remember, it was interesting to see that those without a visual stimulus were the ones which were recalled the most across the class. In addition, all 13 students remembered quotations which were not even given to them on either test, so they had recalled those directly from the play itself. Students verbally told me that they found remembering the quotations for the second and third tests easier, but it could be that they were influenced by their higher test scores. It could also be that the quotations without images were recalled the most because they were the last ones they learnt, although this does still strengthen the argument that students didn't find the visuals helpful. Perhaps students weren't necessarily thinking of the recall process itself, but measured the ease of their revision on their outcomes. However, it could also be the case that, as outlined in the neuroscience journal from earlier, the images became a barrier for students. The first revision task could have been viewed as double the work: instead of remembering the quotation using the image as

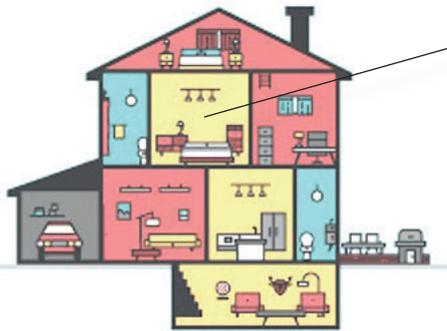
a prompt, students were trying to remember the image and the accompanying quotation, which totals 12 pieces of information to recall. This would support the view that the visual prompt became a hindrance to the group, almost stopping them from learning the accompanying text. In addition, as the scores largely increased for the second test, it may be possible that students who underperformed in the first week worked harder on their revision for the second time. It is also very difficult to determine who actually completed their revision, and who was just recalling quotations which had already potentially been stored in their long-term memory. Karpicke (2016) believes that students simply view knowledge recall as a test and don't realise that this helps them to learn long term. So, perhaps students saw this as an exercise in how much they can remember rather than making purposeful links toward how it would help them to store quotations for future use, which may have been the reason the images were problematic.

After the first test, I projected the visual prompts on to the board by themselves to see what students could remember. Some of the images, such as the devil, actually prompted students to shout out quotations which hadn't been given to them! This play was also studied in Year 10, so students were very familiar with its content, which may have been the reason for this. It could even be the case that reducing it to only 12 quotations was difficult for the group as they are so used to recalling a range of quotations from multiple sources. Unfortunately, due to Covid-19, I was unable to complete the test again. If the situation had been different, I would have repeated all three tests again and compared the results each time to see if they were improving, as well as to analyse which test produced the higher results. I would have also tested them by giving them an assessment question and then seeing how many quotations were remembered, but the accompanying analysis is where most of the marks come from.

⁴<https://www.apa.org/science/about/psa/2016/06/learning-memory>

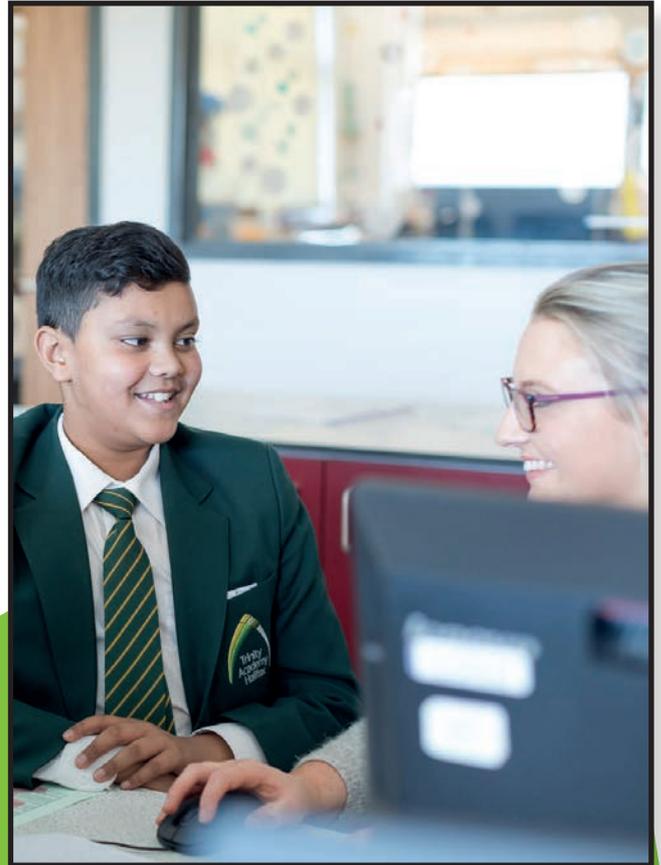
Reflection and next steps:

Moving forward, I would like to experiment with this again, but with an entirely new text to see if this affects the results. Perhaps it was the case that students were trying to match up what they knew to the images I had given them, which made the task more challenging. If this was the case, the images weren't actually prompting them to remember a specific piece of text. If I therefore introduce a whole new text, students wouldn't have any pre-taught information to draw from like they did for this study, given that they were in the second year of their GCSE course. I would also experiment with how I presented visual clues with a focus on being more explicit with how students can revise to use the stimulus more effectively. So, one idea I have had is to use a single graphic which students then create a narrative from, such as in the example below:



As we walk into the bedroom, we see Mrs Johnstone having nightmares which links to the quotation "the devil's got your number."

As you can see, instead of students remembering six different images, they are only actually remembering one, but using this to prompt a narrative in their memory. Another possible experiment is to allow students the option of which image they would like to use; making this personal makes it relatable, which may therefore make it easier to recall. This would also hopefully eliminate the visual clue being a barrier, given that students have decided on these themselves, which may make them relatable in some way. Either way, I think there are still benefits in giving this study further time to experiment with how we can use visual stimulus. It might have been the case that it didn't quite work here, but it may just be that the approach needs refining.





Test 1: To remember quotations with a supporting visual aid

<p>Narrator to Mrs J:</p> <p>“You know the devil’s got your number”</p>	
<p>Mrs Lyons finds out about the locket and Eddie reminds her:</p> <p>“It’s just a secret, everybody has secrets, don’t you have secrets?”</p>	
<p>Narrator in Act 2: Mickey and Edward are adults. Mickey is unemployed and Edward is at university.</p> <p>“Winter broke the promise which Summer had made”</p>	
<p>Narrator at the end of the play after the twin’s deaths.</p> <p>“And do we blame superstition for what came to pass? Or could it be what we, the English, have come to know as class?”</p>	
<p>Mickey inadvertently spurns Linda’s advances, and after she storms off, he reunites with Eddie. They go to the cinema together to watch a naughty film. Mrs Lyons becomes increasingly paranoid and attacks Mrs Johnstone: “Are you always going to follow me?”</p>	
<p>When we see Mickey’s secondary school in Act 2, it’s all “boredom and futility.”</p>	

Test 2: To remember quotations with no visual aid provided

<p>Mickey and Edward sing this together in the song 'My Guy'. They are 14 years old and have just moved away. Mickey sees Edward out of the window but doesn't recognise him.</p> <p>"When nature picked on me, she chose to stick on me."</p>
<p>Mrs Johnstone sings this before the move into a bigger council house.</p> <p>"Living on the never never, constant as the changing weather"</p>
<p>Linda and Eddie begin meeting secretly and Mrs Johnstone sings:</p> <p>"It's just a light romance"</p>
<p>The Narrator at the beginning about Mrs Johnstone:</p> <p>"a mother so cruel there's a stone in place of her heart."</p>
<p>Narrator to Mrs Jones when she loses her job at the end of the play -Mickey has just lost his job also.</p> <p>"It's just another sign of the times"</p>
<p>Mickey is sent to prison, becomes depressed and then addicted to anti-depressants:</p> <p>"His mind's gone dancing".</p> <p>He is released early for good behaviour.</p>

Students' Results

Student	Score /10 Images	Score /10 Words
A	4	5
B	2	5
C	4	4
D	6	4
E	6	5
F	5	5
G	4	5
H	5	6
I	7	6
J	3	4
K	6	Absent
L	6	7
M	6	8





A deep dive into interleaving: What does research really say?

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What is interleaving?

A teaching and learning strategy that has gained a lot of attention recently is an idea called 'interleaving.' Definitions for interleaving vary between sources but nearly always contrast it with another strategy called 'blocking.' Generally speaking, study material is 'blocked' if items from the same category are grouped together and appear consecutively, or 'interleaved' if the

categories are shuffled together (Taylor and Rohrer, 2010). For example, in Mathematics, Barton (2020) describes a blocking approach as when students "study the same type of material over and over again before moving on to a different type of material" and interleaving as when "students practise all of the problems in an order that is more random and less predictable" (p.15).



Figure 1. Illustrated example of blocking versus interleaving sequences of information.

Suggestions for how to apply interleaving in schools can be found in several recent books about teaching (e.g. Barton, 2018, 2020; Brown et al., 2014; Busch and Watson, 2019; McCourt, 2019; Weinstein et al., 2018), podcasts (e.g. Barton, 2017; Kime, 2018; Weinstein and Sumeracki, 2017) and blogs

(e.g. Belham, 2018; Firth, 2019; Gkiokas, 2018; McGrane, 2019; Tsabet, 2018). Furthermore, interleaving has also been discussed by Ofsted in a document published on their website that provides an overview of the research behind the latest Education Inspection Framework (Ofsted, 2019). This suggests that "there is

growing evidence that this can improve retention, and research in mathematics is particularly promising” (p.16). Possibly as a consequence of these, interleaving is also referenced in recent teacher-made resources (Bartram, 2018; Piximaths, n.d.) and online study services (HegartyMaths, 2020). Most of these sources refer to interleaving as being an evidence-based strategy and include references to research articles to support their proposals. It is for this reason, I believe, that there has been an increased interest in how to apply interleaving to classroom practice over the last few years.

Interleaving is an attractive strategy because it sounds like a straightforward idea. Furthermore, it is backed up by a clear reoccurring headline in research: interleaving is better than blocking. But while advice about interleaving sounds clear, it is often vague on critical details. For example, interleaving is better than blocking for learning...learning precisely what? For learning anything or for learning specific things? To illustrate this, consider the following tasks:

- Writing a short story
- Solving a mathematical problem
- Doing a backflip
- Reciting the Spanish word for ‘library’
- Recognising the differences in style between two painters

Each of these actions require a different thought process to complete. It is therefore arguable that they are learned in different ways too. So, which of these does interleaving support? What were the participants studying during the experiments where interleaving led to better results than blocking? And precisely what was it about the act of frequently switching between categories that gave participants an advantage in the test?

Over the last three years, I have been studying interleaving as the focus of my PhD thesis. This has involved a review of 61 articles (or other sources) about interleaving and conducting experiments myself. The thesis is still two years away from completion, but the process so far has been an eye-opening experience about the importance of details in both research and advice. It has revealed several disparities between the empirical research on interleaving and how it is often translated into pedagogical advice. Furthermore, it has highlighted a mass of fine details within the research that often remain absent from discussions about applying interleaving to practice. In summary, findings from educational research are not as simple as ‘interleaving = good; blocking = bad’ and are in fact far more nuanced. This article aims to outline some of the key things that I have learned so far about interleaving research.

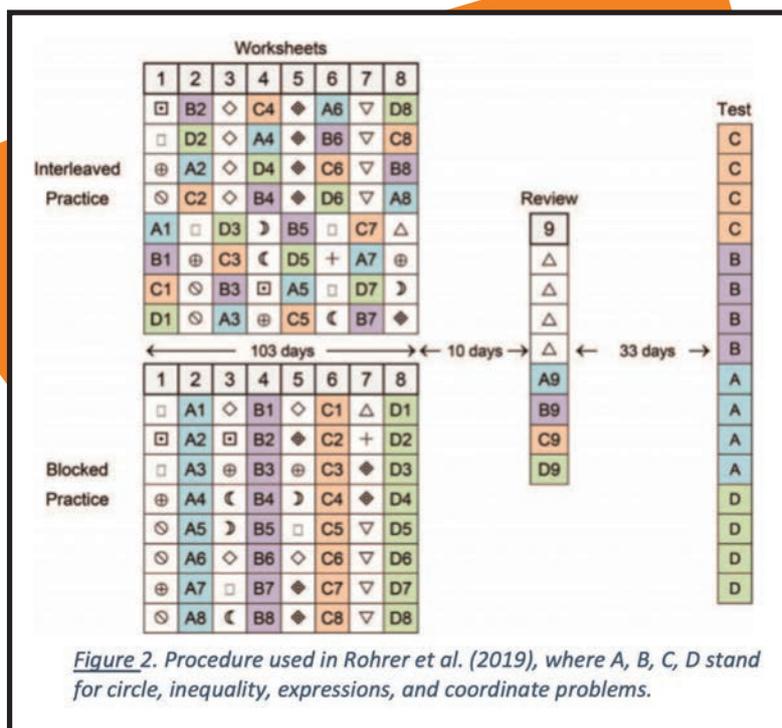
How is interleaving researched?

Only a small minority of research about interleaving has been conducted in schools, using curriculum-based learning material. Within that minority, the most widely cited studies tend to be about high-school students practising mathematical problems. On the other hand, the majority of interleaving research tends to be about learning to categorise information. These studies are often conducted in laboratory-like conditions and involve undergraduates learning to sort novel material that is unrelated to their course (e.g. matching paintings to their artists). This does not suggest that the research is flawed; the studies are robust and designed appropriately for their intended purposes, which are not necessarily about school-based learning. However, these details should be kept in mind when considering how their findings can be applied to teaching in high schools.

Some interleaving research is really about spacing

One strand of interleaving research involves high-school students completing a series of Maths assignments and then doing a test. An example of this can be found in Rohrer et al. (2019), where participants were given weekly assignments over two months that either contained questions

belonging to a single problem type (blocking) or a mixture of problem types (interleaving). They were then given a test on four of the problem types approximately one month after the final assignment (see Figure 2 for design).



Results found that students who completed interleaved assignments scored significantly higher on average than those who did blocked assignments. This has also been found in other experiments that have used a similar process (e.g. Foster et al., 2019; Rohrer et al., 2014). However, interleaving may not have necessarily been the cause of those results; experiments of this design also contain a high degree of spaced repetition.

Which mechanism provided the greatest advantage in these cases? The act of spacing repetitions of similar questions apart, or the act of mixing different questions together? One way to think about this is to consider why a participant

in the interleaving group might have scored higher on circle problems in the test than a participant who blocked. Was it because they saw both circle problems and coordinate problems in the same assignment? Or was it because they practised a circle problem every week for two months? The most likely explanation is that the regular recurrences of each problem type had the greater impact in these interleaved assignments. Therefore, it could be argued that studies of this design really demonstrate the benefits of spaced repetition rather than interleaving. However, it has been suggested that a benefit of interleaving is that it spaces similar questions apart (Brown et al., 2014; Weinstein et al., 2018).

Most interleaving research is actually about category learning

The much bigger strand of interleaving research investigates its effects on learning how to sort information into categories. A common design for experiments in this field is one where participants are tasked with matching paintings to artists by trying to recognise their painting styles. One example of this can be found in Kornell and Bjork (2008), where participants watched a sequence of images on a computer screen that each contained a painting with its artist's name and displayed for three seconds at a time. Images were ordered so that paintings by some artists were presented consecutively (blocking) while others were shuffled together (interleaved). Participants then completed a multiple-choice test where they were shown new paintings by the same artists and had to decide who painted each one.



Figure 3. Example of two study images from Kornell & Bjork, 2008

Similar experiments to this have also been conducted using other categories of information, such as species of birds, species of butterfly (Birnbaum et al., 2013) and diagrams of chemical compounds (Eglington and Kang, 2017). In each of these studies, participants scored significantly higher on average for categories studied with interleaving than blocking. A common explanation for these findings is that during interleaved sequences every image from one category is juxtaposed with an image from a different category. In other words, frequently switching between categories gave participants more opportunities to spot the differences between them. This suggests that there may be situations where the mixing aspect of interleaving can be beneficial, rather than interleaving just being a way to facilitate spacing.

Some claimed benefits of interleaving are not supported by research

Amongst the books, blogs and presentations that discuss interleaving, there are many suggestions about why it can be beneficial. Most of them seem sensible and might probably be true. But they are not all things that have been found or even explored in research.

The most recurrent claim is that interleaving supports long-term memory (e.g. Busch and Watson, 2019; McCourt, 2019), however, research only provides tenuous evidence to support this. For most interleaving experiments, participants were tested on the same day as the study phase. This is because these were investigating the effects that interleaving has on category learning rather than memory effects. There are some studies that tested participants after a few weeks' delay, but these tend to be ones that include a high degree of spacing throughout the experiment (such as the weekly assignment experiments described earlier). A lot of spacing research does focus on memory, and spacing is often discussed alongside interleaving because one strategy can lead to the other. Therefore, it seems likely that interleaving is described as beneficial for memory because it is frequently associated with spacing research.

Weinstein et al. (2018) suggest that "interleaving helps students to make connections between different topics or categories" (p.84). While this seems plausible, 'making connections' doesn't tend to be the focus of interleaving research; it's usually about learning to tell things apart. Furthermore, this source does not reference any studies where participants were tested on their ability to make connections between different categories.

Another claimed benefit is that "interleaving results in the encoding of higher-order presentations and supports far-transfer" (Barton, 2018, p.411). Again, this sounds reasonable and

might be true, but there has been little testing of interleaving effects on higher-order presentations or far-transfer. A couple of studies have experimented with using information in the test that was somewhat different to the information presented during the study phase (e.g. de Croock and van Merriënboer, 2007; Rau et al., 2014), however, these studies found no significant difference between interleaving and blocking for those items. In most cases, the material participants see in the test phase is very similar to the material in the study phase.

Small details about interleaving often get overlooked

The main discussion point about interleaving tends to be the headline: research has found interleaving to be better than blocking. But the fine details of such research can be just as important as the results themselves, because some of it could be critical to the effectiveness of interleaving. It is also worth considering studies where interleaving is not found to be superior to blocking. But these are rarely discussed. Beyond-the-headline points from research can often be neglected but can be significant for decisions about when and how to use interleaving.

For example, in the case of category learning (which makes up the largest proportion of interleaving research), most experiments use pictures as study material. Examples of this include sorting paintings (Kang and Pashler, 2012; Kornell and Bjork, 2008; Zulkipli and Burt, 2013), photographs of birds or butterflies (Birnbaum et al., 2013) and diagrams of chemical compounds (Eglington and Kang, 2017). Studies involving non-picture-based information are few and far between.

Even with pictures, it is worth bearing in mind that thought processes can differ depending on the sort of information in those pictures. There is no hard and fast rule for deciding which artist painted a picture. Various features or styles of

the paintings might provide clues, but none of them guarantee successful identification. So, participants in the painting-category studies would have had to pay attention to lots of aspects within each painting and base their decisions on impressions. However, this is not the way that pictures in Mathematics get categorised. Mathematical categories have absolute rules that determine whether or not something belongs to it. For example, you can tell if a shape is a quadrilateral by counting if it has four sides.

There are occasions when research has found no significant difference between interleaving and blocking. Hausman and Kornell (2014) conducted an experiment that blocked or interleaved two completely unrelated topics: anatomical definitions and Indonesian words. Test results found no significant difference between the two study strategies. There have even been experiments where results for blocking have been greater than interleaving. Carvalho and Goldstone (2012) conducted two category-learning experiments using abstract pictures, where they also varied the levels of similarity between the different pictures. Results indicated that interleaving was superior when the differences between images were subtle, but blocking was superior when images were overtly different. Carvalho and Goldstone (2012) suggest that it can be easier to categorise similar-looking information by looking out for the subtle changes that occur when switching between examples from different categories (interleaving). However, when images contain lots of differences anyway, then it can be easier to look for things that remain constant when switching between examples within the same category (blocking). This has implications for teachers when they are deciding what content to interleave: it may be more beneficial to use information when students are trying to distinguish between things that appear similar (e.g. sparrows and finches) than it is to interleave things that are a completely different (e.g. circles and cuboids).

But the overlooked detail that is probably the most pertinent to schools is that interleaving studies rarely include any teachers. Recall that in the painter-painting matching experiments (such as in Kornell and Bjork, 2008), participants learned to recognise each artist by inspecting a series of paintings for three seconds each without any assistance. This can hardly be the easiest way to learn to distinguish between paintings by different artists! They may have found it easier if an expert or teacher had explicitly explained to them what to look out for. Studies like these do not account for any effects that a teacher can have on learning to categorise information.

However, this is not a criticism of the research. Most of these experiments do not include teachers because they are investigating the effects of interleaving and blocking on inductive learning. In other words: things that people notice independently through observation. While school-based lessons may include some moments when students notice things for themselves, inductive learning is not a strategy that teachers would normally rely on. Teachers tend to draw students' attention toward key pieces of information explicitly through a more direct method such as questioning or explanation. This leads us to the final and probably the most important point about interleaving...



Interleaving is not the only alternative to blocking! And for that matter, how often do teachers really block anyway?

It is worth bearing in mind that advice rarely ever claims that interleaving is the best strategy for learning; it only claims that interleaving is better than blocking. This is an important point because empirical research tends to only compare interleaving with blocking. But how often do high-school teachers ever set work that is like the blocked work in these experiments?

In the studies that involved setting students a weekly Maths assignment (e.g. Rohrer et al., 2019), questions that belonged to the same category were often duplicates of each other with only their numbers changed. This meant that blocked assignments consisted of a full set of questions that were all nearly identical to each other. How often do teachers really set students work like this? In Mathematics, textbook exercises often provide questions that progress with difficulty and contain differences from one question to the next (e.g. the way shapes are orientated or amount of information they provide). However, no studies have yet to compare interleaving with a set of questions that contain these sorts of features. It could be argued that there are many strategies that are better than setting students a sequence of nearly identical questions.

In the interleaving studies that focused on category learning, participants learned to tell categories apart by viewing a silent sequence of images that were arranged in either a blocked or interleaved order. This would also be an unusual way to teach students about categories in a school-based scenario. While interleaving was found to be better than blocking in many of these situations, an alternative approach could be for a teacher to display some examples side by side and explain how to tell them apart. However, no studies have yet compared interleaving with a teacher providing an explanation.

Conclusions

The purpose of this article is not to suggest that interleaving is useless. There are many occasions where students are likely to get mixed up between things that are very similar. Therefore, in principle, interleaving those things with each other may give students an opportunity to practise unmixing them. An example of this in Mathematics could be Pythagoras and trigonometry; these two things are usually learned separately but look very similar (see Figure 4). So, providing students with some time where they practise a mixture of both types of problems might help them learn how to tell them apart.

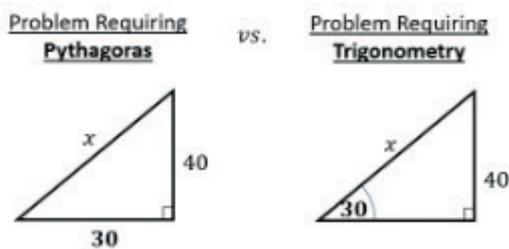
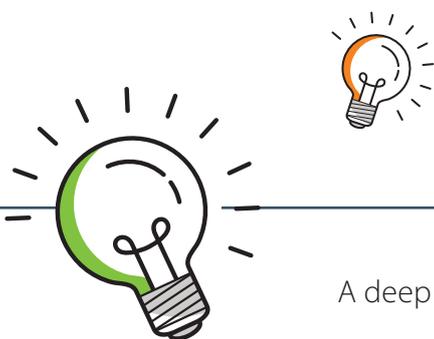


Figure 4. Example of two topics that appear similar in mathematics.

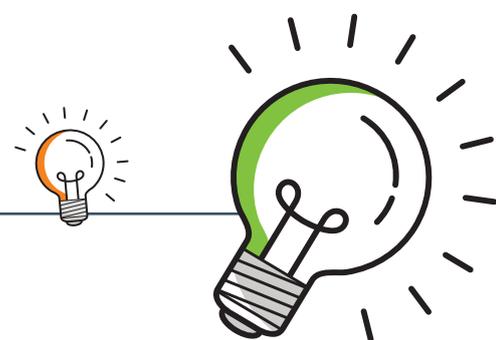
This article is also not attempting to rebut the research or suggesting that any pedagogical advice about interleaving is wrong. Most interleaving research is robust and uses experiments that are fit for the intended purposes of those studies. Also, many of the suggested practical applications of interleaving in books, blogs and workshops seem sensible and are likely to have their uses. However, this article is to show that blunt headlines such as “interleaving is better than blocking” present an oversimplified message. Learning is not straight forward and neither is research that explores how it happens. Teaching, learning and research are full of nuances and subtleties that are just as important as the methods that are used to achieve them.



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Ensuring literacy is a hot topic across the curriculum: a report on disciplinary literacy

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The theory behind disciplinary literacy

The EEF (R.Coleman, 2019) suggests that literacy is a crucial tool for accessing learning across the curriculum and is closely linked to lifelong outcomes. It recommends the use of 'disciplinary literacy', which is an approach to improving literacy across the whole curriculum through the recognition that teachers of all subjects must teach students how to read, write and communicate effectively in their subjects.

It is an unavoidable truth that the importance of literacy provision is often bestowed to the English department and Literacy Coordinators are often solely responsible for literacy instruction. Geoff Barton, in his book *Don't Call it Literacy* (Barton, 2012), highlights the idea that our perception of literacy in schools is often flawed by seeing it as a bolt-on rather than integral to successful lifelong learning. This is challenged through 'disciplinary literacy' and the emphasis is placed upon every teacher to communicate their subject through academic language and ensure that students can read, write and communicate successfully within their particular subject area.

In their report, *Teaching Disciplinary Literacy to Adolescents: Rethinking Content-Area Literacy* (Shanahan S. &, 2008), Shanahan and Shanahan explore the tensions created by this approach and suggest the idea of 'disciplinary literacy' as a possible solution. They begin their paper by examining the approach to literacy often adopted in the 1990s, predicated on the assumption that once the basics of literacy were accomplished, students would be "well equipped for literacy-related tasks in later life" (Blair, 1999) and that "basic reading skills will automatically evolve into more advanced reading skills, and that these basic skills are highly generalizable and adaptable."

Although the writers claim that these assumptions do hold some validity in that the "basic perceptual and decoding skills that are connected with early literacy learning are entailed in virtually all reading tasks," what is actually learned early on become less useful. They provide the example of words such as *of*, *is* and *the*, which are ubiquitous, often appearing in a range of everyday texts. However, by the time students are working within a secondary school, the demand for knowledge and application of subject-specific (Tier 3) vocabulary is far greater and more complex than the early basic skills. For

example, knowledge of high frequency words will not necessarily allow students to access the more complex and specialised vocabulary required in many different subject areas. Alex Quigley, in his blog *The Confident Teacher* (Quigley, 2018), supports this view as he suggests that “the very language of secondary school subjects shifts in complexity and even successful readers from primary school can run aground if their subject knowledge is lacking.” This demonstrates the need for a disciplinary approach to literacy as students move through their school life, with a particular focus on reading and writing skills.

Tim Shanahan in his blog (Shanahan T. , 2017) offers this definition of a disciplinary approach to literacy as being “based upon the idea that literacy and text are specialized, and even unique, across the disciplines. Historians engage in very different approaches to reading than mathematicians do, for instance. Similarly, even those who know little about math or literature can easily distinguish as science text from a literary one.”

A clear advantage of this approach is that it is more likely to gain the support of teachers from across the school. Shanahan and Shanahan suggest that “teachers in the disciplines resist literacy strategy instruction when that instruction is promulgated by individuals who are literacy experts without particular content knowledge,” but in the case of disciplinary literacy, the distinctive literacy applications within different subject areas are conceded and therefore have a more considerable chance of being received positively and embraced within classroom practice.



So, what should all teachers be doing?



Each academic discipline has its own subject-specific vocabulary and, for students, navigating this is often a daunting experience. The sheer quantity of vocabulary that a student is required to know is often overwhelming. Not only this, but there is the expectation that students can move from subject to subject and code-switch instantly between these different registers. A student needs to be explicitly taught how to read this disciplinary code or language to support their understanding of the subject and their ability to be successful. We must not assume that they can simply pick up these codes and conventions of the different subjects by the process of osmosis.

The new EEF Implementation Guidance report provides a lot of helpful advice and outlines disciplinary literacy as “an approach to improving literacy across the curriculum”. It recognises that literacy skills are both general and subject specific emphasising the value of supporting teachers of every subject to teach students how to read, write and communicate effectively.

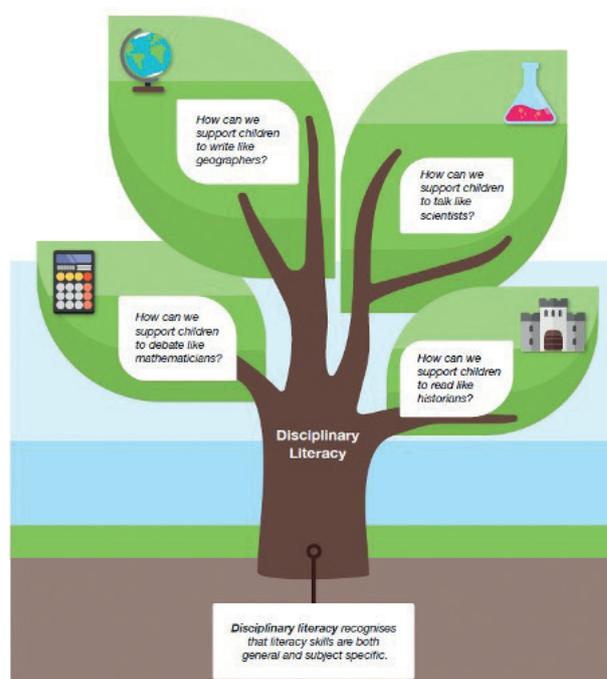


Figure 1. Disciplinary literacy

Vocabulary instruction

Teachers should be providing explicit teaching of subject-specific vocabulary and encouraging students to be using this in all aspects of their learning. Exposing students to the etymological background and morphology of words is a particularly effective method of enabling them to remember these words and understand how different words and ideas are connected. It is helpful for both teachers and students to be able to identify these patterns within specialist vocabulary. Both an etymological approach and a morphological study of vocabulary can help to illuminate some of the connections between words and enable students to recognise common root words. The EEF provides this model as an example of a morphological approach to learning vocabulary.

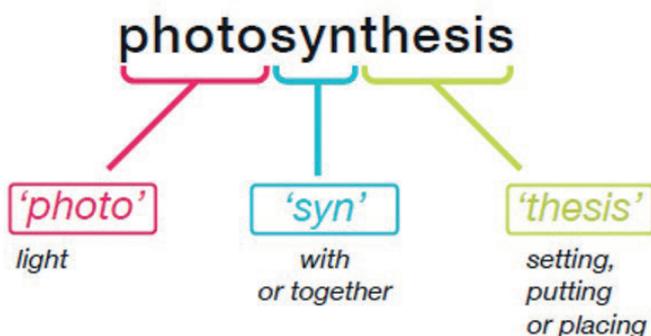


Figure 2. The morphology of photosynthesis

Subject specialists should ensure that Tier 2 and Tier 3 vocabulary is prioritised as these are the terms that students are less likely to encounter in their everyday lives. The EEF (R.Coleman, 2019) outlines that “the specialised vocabulary of mathematics, for example, includes words that have a specific meaning in maths, but have different meanings in other contexts. For example, ‘factors’ of a number in mathematics has a different meaning to the ‘factors’ that influenced World War One in History.”

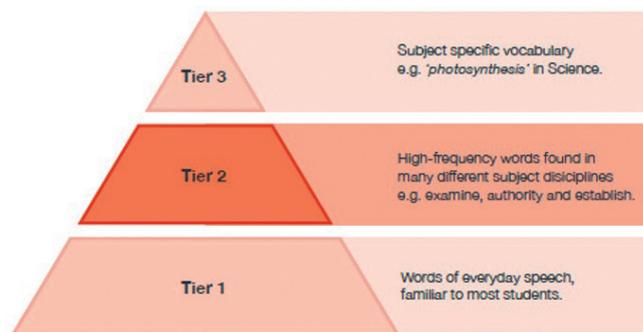


Figure 3. Tiers of vocabulary

There are several suggested methods for explicitly teaching vocabulary in the classroom and the EEF outlines some of these as:

- Exploring common root words
- Undertaking word-building activities
- Encouraging independent word-learning strategies
- Using graphic organisers and concept maps
- Undertaking regular low-stakes testing
- Consistently signposting synonyms
- Combining vocabulary development with spelling instruction

Alongside these approaches, vocabulary instruction should be aligned with curriculum development. Careful selection of Tier 2 and Tier 3 vocabulary for explicit teaching is crucial. Making careful links between subjects is vital for recognising vocabulary that crosses subject disciplines and the issues that may arise from words which are ‘false friends,’ in that they are used in multiple subjects but have a different meaning in each.



Teaching reading

In his blog *Shanahan on Literacy*, Tim Shanahan (Shanahan T., 2017) emphasises that “reading has to be a big part of students’ disciplinary literacy” and that teachers often find ways of avoiding complex reading from textbooks by presenting the information in a more digestible manner. Students should be taught in every subject how to understand complex, academic texts. Strategies such as making predictions, questioning and accessing prior knowledge to access a text will support students’ comprehension of more difficult texts. Independence should be promoted through gradually removing support strategies such as modelling and group work.

The EEF (R.Coleman, 2019) outlines the premise that academic reading is often challenging because it “requires students to actively engage with complex, subject-specific texts.” They also suggest several strategies that teachers should employ to support their students’ comprehension of academic texts within their subject areas:

- Activating prior knowledge of a topic to help them to build a fuller ‘mental model’ of the text
- Making predictions
- Generating their own questions to check their comprehension and understanding
- Identifying areas of uncertainty for clarification – this may be individual words and phrases
- Summarising the meaning of sections of the text

The final and perhaps most useful approach is that of ‘reciprocal reading’ (see figure below):



Figure 4. The reciprocal reading approach

Following this model involves the students working collaboratively, guided by the teacher. Over time, this support and guidance is gradually lessened so that students can tackle these strategies more independently.

Writing tasks

It is vital that students understand that reading and writing are complementary skills so as teachers we should consider integrating reading and writing instruction rather than assuming it is more beneficial for students to only write once they have learned the material.

Some examples of how this can be achieved are below (EEF):

- Writing before reading (prior knowledge recall)
- Using annotations
- Short summaries as they read

The EEF (R.Coleman, 2019) states that writing is challenging for both teachers and students. Students are often required to recall vast quantities of information for higher mark questions alongside the requirement of communicating clearly, accurately and with coherent structure. Therefore, with all these things considered, the writing process often places huge demands on the working memory and the cognitive load.

There are several strategies that teachers can use to try and help students cope with this process. These often involve breaking down complex writing tasks. See below for some suggested approaches:

- Provide word, sentence and whole-text level support – word banks, sentence starters, planning grids
- Ensure students understand the Tier 2 vocabulary, e.g. what does ‘evaluate’ mean?
- Explicitly teach planning strategies
- Encourage and support students to monitor and review their own work – sharing success criteria etc.

In addition to these, students' motivation for writing is crucial through strategies such as collaboration (pairs or writing teams), competition (with themselves or others) and celebrating their own success.

Teachers must provide explicit instruction in every subject to support their students when tackling more complex writing tasks. Modelling of planning and responses should be provided, and the writing process should be broken down into different stages.

Implementation of any strategy is predominantly dependent on a 'buy-in' from teachers. Collaborative work, sharing of strategies and resources coupled with staff training and the monitoring of delivery will build toward a sustained and successful approach.

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Challenging the African single story

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In European society, we often hold to a problematic and oversimplified stereotype of Africa. When Chimamanda Ngozi Adichie delivered a TED Talk in 2009, she stated: “the telling of a single story about people and places over and over again can quickly become the definitive story of those places and of the people who live in them” (2009). This raises “many questions for Geography teachers concerning the stories we create in our classroom and the unintended consequences for young peoples’ geographical understanding if we only tell single stories” (Biddulph, 2011). With a narrative of drought, famine and poverty the prevalence of the single story made me reconsider my approach to teaching Africa.



The goal of my action research was to challenge the African single-story in the classroom and get students to consider the diversity of Africa

Many geographers have commented on the difficulty of challenging the African single story in the classroom. Biddulph states: “the notion of the single story challenges us to consider how we enable young people to critically understand diversity in all its manifestations” (2011:24). Owen and Witts support Biddulph but highlight the conundrum of wanting “to condense complex ideas and examples into something understandable and relevant to our students...” while at the same time “not reinforcing the single story” (2018:52).

The goal of my action research was to challenge the African single story in the classroom and get students to consider the diversity of Africa. I used a Year 7 scheme on the Sahel to adapt and trial several strategies with a mixed-ability group and a middle set class. I have included some of the strategies I found to be effective in the classroom.



1. Make students aware of map inequalities



I began my action research by aiming to challenge misconceptions on the size of Africa which arguably stems from student familiarity with the Mercator map. In their piece on 'decolonising Geography', Rackley asks "why we continue to use the Mercator map in the age of gyro compasses, radar and GPS, when (a) it puts the UK and Europe front and centre of the map, and (b) its distortion maps Europe and the 'global north' look larger? As a product of colonialism, the map is a classic example of how those with power, privilege and authority determine how others see the world and those who occupy it" (Rackley, 2020). To challenge misconceptions on Africa's size I presented students with a Mercator and Gall Peters map (a map where all areas are the correct size relative to each other). I then asked students

which map they were most familiar with, and what differences they could spot between both maps. Students were surprised the Gall Peters map showed the true size of Africa and were shocked at the actual scale of the continent. I found this task effective for three reasons. Firstly, it reinforced to students the vast size of the African continent, made up of 54 different countries. Secondly, the exercise began to show students the need to be critical about the information around them and recognise that stories told about Africa may not be truthful. Finally, asking the question: "Why do you think we are used to seeing the Mercator map more?" meant that without explicitly using the term 'colonialism' students began to critique the production of colonially produced knowledge.

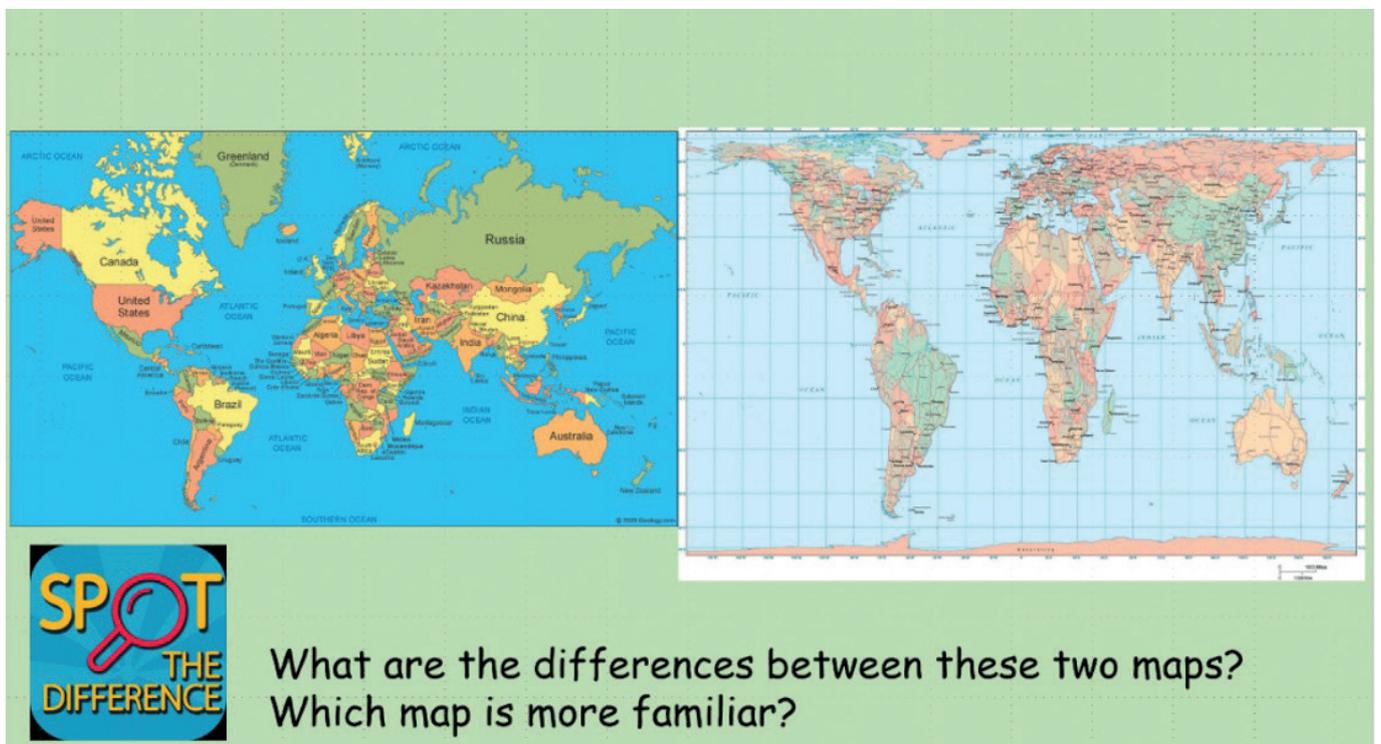


Figure 1.

2. Discuss what perceptions are and how they are shaped

The second lesson I planned for was on perceptions of Africa (adapted from a Trinity Halifax scheme of work). This lesson involved showing students a range of images as seen in Figure 2. As a 'think, pair, share' students had to first decide which images fitted with their perception of Africa and why. The second task was to pick which images surprised them and explain why. After this task I got students to revisit what they wrote when I asked them to write down everything they knew about Africa

in Lesson 1. Answers had included 'Africa is poor,' 'Africa is very hot and dry,' 'there is not much water' and showcased the single story. I asked students if they would change what they had written first time round. A selection of answers from their whiteboards included: "some parts of Africa are poor, but I know there are rich places too," "there are a range of climates in Africa, there is even snow!" "In Tunisia they have a water park where there is lots of clean water." Although some answers showed simplistic dichotomies between 'rich and poor parts' student answers showed their understanding of the diversity in Africa had increased.



Figure 2.

3. Include students' personal geographies

In my classes I had a couple of students who were born in Ghana and Gambia. After reading Doyle's paper on including students' personal geographies, I wanted to make sure their own lived experience wasn't overlooked (Doyle, 2019). To avoid making students feel uncomfortable, I spoke to students before the lesson and asked if they'd like to share

their own experience and where they had lived. Both students were keen to share and spoke about their homes, climate and wildlife around the places they lived. This avoided excluding students' personal geographies and allowed students to gain different perspectives.





4. Consider using Dollar Street

After reading *Factfulness* by Hans Rosling (2018), I was also keen to utilise the online tool ‘Dollar Street’ which imagines the world as a street ordered by income. The daily lives of each family shown in Dollar Street is depicted by a wide selection of photos and videos of everyday items such as shoes, toothbrushes, TVs, beds, lights and sinks, so visitors can see how much income affects how families live. From the Dollar Street site, I had selected three families for students to explore: one family in Burundi earning \$27 a month, a family in Tunisia earning \$200 a month and a family in Ethiopia earning \$6,300 a month.

For each family, students had to use the photos (see Figure 3) to answer questions on a Microsoft form. Figure 4 gives an example of sources students had to use to answer each of the questions. The aim of this exercise was to give students space to explore the programme and recognise the difference in lifestyles across Africa, showing the diversity of the continent. The final task was to compare an Ethiopian family on \$200 a month with the Ethiopian family on \$6,300 a month, which aimed for students to see the diversity within countries as well as across the continent.

Find the family below on dollar street and answer the following questions:

1. How much does the family earn a year?
2. Describe the kitchen of the family in Burundi.
3. Describe what the bathroom is like for the family in Burundi
4. Are there any similarities between the family in Burundi and your own home?

Figure 3 and 4.



5. Include a narrative of hope and agency

As stated previously, I was concerned that teaching about the Sahel would only feed into common perceptions of Sub-Saharan Africa as a place of drought, famine and poverty. Although the unit explored the issues of drought and famine, and the exacerbation of these issues by climate change, we also looked at what solutions were being put in place. I was very keen to avoid the 'white saviour' narrative with a focus on overseas aid projects in the Sahel region. Instead, we looked at the success of the 'Great Green Wall', an African-led project which involves planting a 15km-wide belt of trees from West to East Africa across the Sahel region. The project is not completed but has so far been successful and is set to become an eighth wonder of the world. The theme of hope in this lesson was important to challenge the other narrative of despair which is hard to avoid when teaching the issues of the Sahel. Furthermore, this lesson highlighted the agency and innovation of African-led projects which is often undermined by a focus on Western aid in the media.

Reflections

Following the scheme of work, I got students to complete a survey on the unit. The survey showed 70% felt they only saw a negative perception of Africa on TV. Seventy-five percent disagreed with the statement 'Africa is a poor continent' and 60% of students felt their perception of Africa had changed to a great extent after completing the unit.

Reflecting on the structure of the scheme of work I still feel some discomfort about structuring the first lessons to look at the African continent as a whole. In no other subject would we look at a whole continent in a lesson, i.e. Asia or Europe. Instead, the focus would always be on a country within the continent. Therefore, looking at Africa may only serve to perpetuate ideas that Africa is a homogenous land mass, overlooking Africa as a continent of 54 countries which have vastly different cultures, opportunities and challenges. Furthermore, perhaps a scheme of work on the Sahel is also too broad an area, again overlooking the diversity of the ten countries situated in the Sahel region. Whilst using the five strategies in a future scheme of work on Africa, I would consider focusing in on a particular country within Africa rather than a broader region.





Dual coding in MFL

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How effective is dual coding theory in supporting the retrieval of gender/noun/adjective, for accurate sentence agreement in MFL?

Context of study:

Since becoming a 6th Form MFL teacher, I have witnessed first-hand the challenges faced by learners in applying the correct gender/noun/adjective agreement in longer written and spoken pieces of work. Marking over time revealed inconsistencies in spontaneous retrieval of abstract noun/adjective agreement, especially as more topics were covered throughout the year.

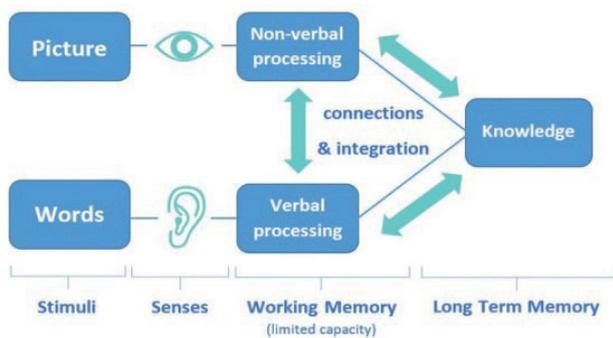
A bilingual approach to teaching and learning MFL, as per Content and Language Integrated Learning (CLIL), is encouraged in lessons, maximising exposure to the target language and immersing students in grammatical structures and vocabulary, as a means of scaffolding learning and optimising long-term memory. Mohan (1986: 104 cited in Coonan, 2012: 124) stresses the importance of building complexity, by not presuming that the learner can automatically function at the abstract level without some kind of support in building up the language competence to do so, by internalising structures, according to a student's own visual/verbal/written

code, with the aim of strengthening productive skills – speaking and writing for more secure longer-term retention and retrieval.

Numerous journal articles have been written on Paivio's dual coding theory (1971, 1986), as a way of supporting bilingual memory and pedagogy in the classroom. This sparked my interest in introducing dual coding within Year 12 and 13 MFL lessons, to support accurate retrieval of gender/noun/adjective agreement within longer sentences. The following diagram in *The Learning Scientists Weekly Digest 67* (July 2017) best represents the two independent information stores, verbal and non-verbal processing, which on a neuroscientific level, translates as strengthening neural pathway connections via parallel distributed processing put forward by McClelland, Rumelhart and Hinton (1986), for stronger long-term memory.



Allan Paivio's Dual-Coding Theory



Paivio's dual coding theory (1971, 1986) highlights the importance of imagery in two-way processing speed as a means of aiding content retrieval, by relieving working memory and presenting complex and conceptual ideas as mentioned by Tharby (2019), building on Fabiani's (2016) article, suggesting that learners are more likely to retrieve content that they have summarised/produced themselves. This involves creating their own dual-coded images, according to their mental visual architecture.

Given the variety of MFL topics covered over two years, ranging from History, Politics, Social and Cultural themes, for Paper 1 Listening/Reading/ Translation, Paper 2 Writing – Film and Literature and Paper 3 Speaking, within a CLIL classroom, it is vital to ensure that alongside content teaching, as per success criteria AO4, accuracy is also upheld as per AO3. "In the early stages of (foreign) language learning, language is embedded in rich context (drawings, photographs, and other non-verbal codes) scaffolding comprehension and production. It makes up for the lack of mastery in the language. It is indeed a basic facet of the communicative approach. As mastery increases however, and as a means of increasing mastery, contextual support is gradually withdrawn" (Coonan, 2012:125; Cummins cited in Baker, 1996: 145-161). Although it may seem that images are often surplus to requirements at 6th Form, in the absence of a fully immersive target language environment, where accurate language application becomes second nature, personalised

dual-coded information may be required for accurate language retrieval of abstract content.

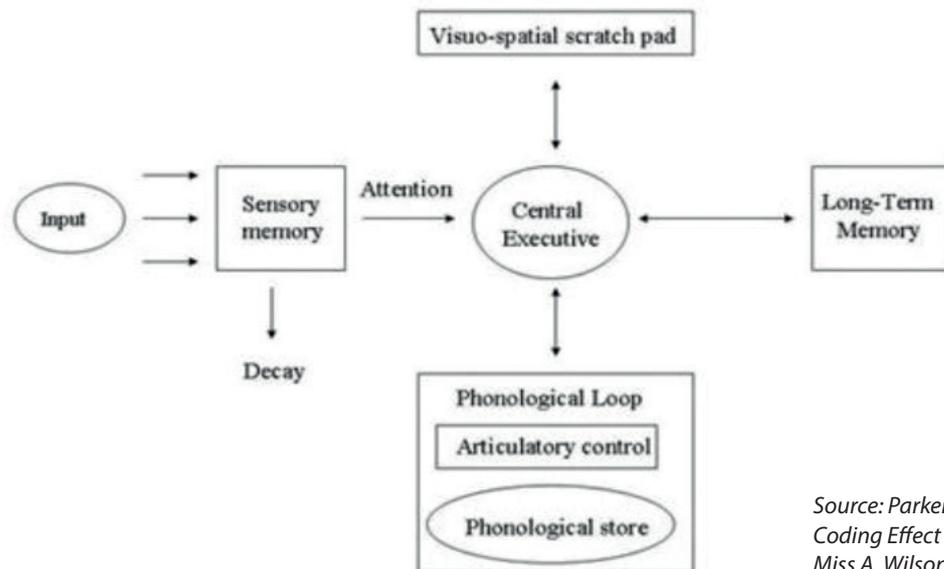
This is especially true when considering the concreteness effect, in relation to processing speed in remembering abstract, as opposed to concrete, nouns. Fabiani (2016:1) hypothesises that words such as 'table' and 'notebook' are encoded by our cognitive system, both at the verbal and imaginative level, while abstract words like 'epistemology' or 'notwithstanding' are mostly only recorded verbally.

For this reason, it is easier to recall concrete, as opposed to abstract, nouns, with abstract nouns requiring learners to create schemata to support memory and retrieval via personalised context creation. "Dual-coding theory claims that the processing of abstract nouns relies on verbal code representations of the left cerebral hemisphere only, whereas concrete nouns additionally access a second image-based processing system in the right hemisphere observed an advantage of the left hemisphere for verbs, adjectives, and low imagery noun" (Paivio, 1986, cited in Jessen et al., 2000:103-104).

Schemata are theorised as abstract knowledge structures (Anderson and Pearson, 1984) or data structures for representing generic concepts stored in memory (Rumelhart, 1980; Rumelhart and Ortony, 1977) as critiqued by Sadoski, Paivio and Goetz (1991) in supporting the necessity for dual coding for longer sentences. This is also linked to Sweller's (1988, 1998) cognitive load theory – rewiring your cognitive architecture via schemas to understand complex material, as would be the case when aiming for sentence accuracy of gender/noun and adjective. In simpler terms, this means creating an imaginary personalised narrative that is meaningful on an individual level, by creating multiple associations. "To make tangible also the abstract concepts we must therefore create images that represent them to us" (Fabiani, 2016:1).

Prior to Paivio's findings, Baddeley and Hitch laid the foundations for dual coding theory by creating the Working Memory Model in 1974, as seen to support more efficient information processing, highlighting the complexity of memory. The limitations of this model meant

that it was less evolved, due to being one-way, as opposed to Paivio's two-way model, which aims to strengthen long-term memory using verbal and visual stimuli within synchronous and sequential processing. A comparison can be seen in the two diagrams below.



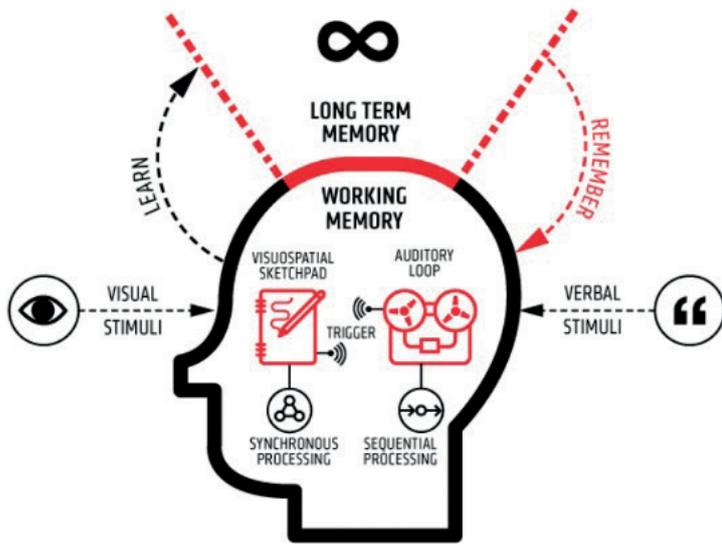
Source: Parker, M. (2020) An Investigation into the Dual Coding Effect - Higher Psychology. Further explained in Miss A. Wilson's PPT slides – Psychology teacher at TSFA.





ALLAN PAIVIO'S DUAL CODING THEORY

Visualized with a touch of Backley & Hitch, and Willingham models.



Source – image from Learning Connected article Feb 2020

Methodology

Since September, I have found that using the Teams Collaboration Space to share images, content and audio has revolutionised MFL teaching, supporting collaborative learning via technology, where all students feel happy to share work with their peers, learn from each other and receive feedback. This supports the view put forward by Noroozi, Järvelä and Kirschner (2019:295) regarding the importance of

self-regulated learning (SRL) via multidisciplinary innovations and technologies: “Technology-enhanced learning environments provide ample opportunities for learners to self-regulate their learning processes and activities for achieving the intended learning outcome.”

It is important to note that the positioning of information may aid or hinder a learner’s ability to process or retrieve information and this is where contiguity theory/spatial contiguity – where images and text are placed in relation to each other, often used in multimedia learning – are of vital importance (Mayer, 2001).

In order to promote accurate bilingualism and spontaneous speaking, students were requested to code content that they had written for homework or in class, in response to essay or speaking questions, and therefore had researched the adjectives and nouns that they wished to use. They were encouraged to code abstract nouns, to support conceptual complexity. Vaid (1988:86) hypothesises that “according to a dual coding view of bilingual memory, words in the translate condition should be better recalled than those in the synonym or copy conditions.” Alongside the exercises coding and testing written texts for Paper 2 Writing and Paper 3 Speaking, students responded to a questionnaire as part of the primary research method process.



Research findings

Primary research

After considering the areas of weakness found in A-level writing and speaking, and the option to test concrete versus abstract nouns, I decided to challenge students to code abstract noun sentences with the aim of developing accurate gender/noun/adjective/agreement within a more complex sentence.

In considering the best way to conduct the study, a qualitative research study was devised within a standardised grid framework across Year 12 and 13 MFL classes, as seen in the table below.

Students were provided with speaking or writing content to dual code, that had either been produced for homework or was completed in class under the below headings.

Gender and noun	Adjective	English translation	Dual coded sentence including accurate noun and adjective agreement.	Image representing the dual coded sentence.
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In subsequent lessons, students were tested by removing the gender/noun/adjective from the grid and being asked to use the English translation, image and rest of the sentence to populate the gaps as accurately as possible which they would then correct as in the below example. All MFL classes coded a variety of Paper 1, 2 and 3 content, and created their dual-coded sentences using the below approach for consistency.

It appears that a large number of participants found that personalising the image as much as possible helped them to remember the dual-coded sentence agreement more than a more generic image.

Upon analysing the coded tables, it became evident that despite discussion surrounding what constitutes a concrete or an abstract noun, some

Each student added a personalised image from the Teams Creative Commons Collaboration Space, to help them remember the noun (preferably an abstract noun), gender and adjective to be written within a sentence. This also included spatial contiguity, by adding the sentence and image in close proximity. Depending on the grammar rules of the target language, the position of the adjective would also need to be considered within the dual-coded sentence. They didn't necessarily have to use the most obvious image depicting the abstract noun and/or adjective within the sentence, but to consider a meaningful image, likely to help them build new/strengthened schemata.

students still found it difficult to differentiate between the two, or preferred to use the noun that they had already used in their work.

More testing over time would need to be carried out, to determine the effects on long-term memory. Although there is promising evidence to hypothesise that dual coding could be truly effective in MFL teaching and learning, at this early stage, there are still some misconceptions and errors encountered at the testing phase to know the real, as opposed to superficial, positive results of this study.



Impact and reflection

As part of primary research, following the dual-coding grid creation testing phase, a Microsoft Forms questionnaire was devised to incorporate some quantitative analysis, through the use of pie charts, graphs and qualitative analysis from written responses. Analysis of MFL participant responses aimed to determine the efficiency of this theory for future teaching and learning purposes.

The project has highlighted to students the importance of checking the accuracy of their sentences – be it genders/adjective endings/ abstract vs concrete nouns, prior to building their own image-based linguistic narrative. The focus should remain on the sentence, linked to clear, colourful and uncluttered images to quickly flag up content via personalised schemata, therefore supporting a faster retrieval rate. This is especially important during timed assessments and spontaneous speaking.

6. Provide three gender/noun/adjective dual coded sentences that you remember most vividly and why.

Responses from participants, detailing reasons why they remembered the unprompted dual-coded sentence:

1. La dictadura estratégica – because I used a bright colourful picture which was also personal. The picture was meaningful. I used a sentence that I could relate to, the sentence was easy to remember for me.
2. La claustrofobia incesante, El cuello robusto, I only remember these, I remember more the images but not the sentences.
3. Les bracelets électroniques, le droit humain, les infractions sexuelles
4. Die abgrenzte Arterie – The photo I used amuses me. Le voyage fantastique - the photo is very personal to me and serves the purpose of helping me travel. der Aegypter Mumie -

the photo I used makes me think of my own childhood memories. (incorrect gender f/ adjective ending)

5. L'influence anglophone - photo of Barack Obama giving a speech. Les initiatives de réhabilitation - man doing physiotherapy. L'aide financière - charity box. Images that stuck out to me more, e.g. the image of Barack Obama being quite vibrant, clear picture in my head.
6. El cohorte enorme; el pensamiento creciente; la doctrina religiosa. For each of these I chose images that were very effective for memory retrieval. I seemed to remember the colours better than the shapes in the images, so I will consider this when choosing images in the future.
7. Beyoncé, Shakira et Meg thee Stallion sont des musiciennes connues. - I think that it was just a really easy link to make because they are famous musicians. (check the use of concrete vs abstract nouns)
8. Ayant une personnalité forte peut causer des disputes. - not really sure about why I remembered this one to be honest. (adjective should be before the noun here)
9. Die kalten Alpen, Der Kleine Eisman, Seine großen Grasschuhe.

The questionnaire results highlight that a significant proportion of the participants are already aware of this and may use the benefits provided by dual coding to personalise the noun/ adjective relationships and agreements from their AQA vocabulary lists, with a third of respondents seeing the benefit to be applied across all aspects of the A-level curriculum, with a further third of students in Paper 3 Speaking cards and the final third in Paper 2 essays.

7. Would you use Dual Coding to learn AQA vocabulary list abstract nouns in future?

[More Details](#)

Yes	6
No	0
Maybe	3



9. Where are you likely to use these dual coded grammatical constructions most?

[More Details](#)

Paper 1 summaries	0
Paper 2 essays	3
Paper 3 speaking cards	3
Creative writing	0
All of the above	3



Next steps

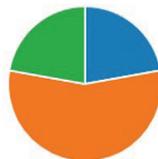
Based on the findings, students found the dual-coding exercises to be somewhat useful.

Students already use Quizlet to create personalised vocabulary lists and this may be the reason that the majority chose this option. Over time, adding images to a sentence including genders/abstract nouns/adjectives, may eliminate grammatical confusion and support conceptual complexity. Based on the questionnaire analysis, most students see the benefit in using dual coding to support accurate sentence agreement and are somewhat likely to adopt dual coding as a learning method. See below participant responses.

1. How useful are you finding the Dual Coding exercises?

[More Details](#)

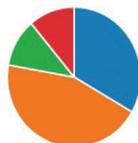
Extremely useful	2
Somewhat useful	5
Neutral	2
Somewhat not useful	0
Extremely not useful	0



3. How likely are you to use the Dual Coding method to support your learning of adjective/n agreements?

[More Details](#)

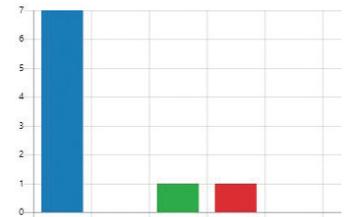
Very likely	3
Somewhat likely	4
Neither likely nor unlikely	1
Somewhat unlikely	1
Very unlikely	0



8. Which method are you most likely to use in future to continue embedding Dual coding accurate gender/noun/adjective agreement?

[More Details](#)

Quizlet	7
Memrise	0
Kahoot	1
Word doc	1
One Note page on the Collab...	0
Other	0



Conclusion

CLIL, dual coding and parallel distributed processing ensure that students focus on the most important aspects of their learning for application purposes. For dual coding to be successful, learners are also required to apply an element of metacognition in terms of understanding the function of particular vocabulary and grammar in a sentence. Best summarised by Fabiani (2016:1): "our memory can be enhanced using the imagination. The images must be well defined (though not excessively, in order to avoid unnecessary overloading), but we must also modify them and give them characteristics that can link them to the concepts we want to store." This also holds true for the technological tool used to store these images, be it Quizlet, Kahoot or a Word document, as well as the information chosen to personalise using dual coding theory, to strengthen long-term memory for efficient future retrieval.





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An Early Career Perspective





How does low literacy negatively impact learning and how can we address this barrier to learning in the MFL classroom and beyond?

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Context

Frederick Douglass once said: "Once you learn to read, you will be forever free." He, the famous abolitionist, was talking about slavery in 19th Century America, a time and context very different to our own here in Yorkshire. However, his message still rings true today. The ability to read and write fluently is essential, and opens a world of opportunity creatively, personally and professionally. The Early Intervention Foundation produced research that highlights the potential damage that poor literacy from a young age can have, although it is well worth considering the myriad of other factors that can influence these outcomes. According to the Foundation, children with language difficulties at age five were "four times more likely to have reading difficulties in adulthood, three times as likely to have mental health problems, and twice as likely to be unemployed" (Harley, 2018).

We take it for granted, the capacity to read. However, the last two years working in education have taught me that for many young people a love of literature is absent from the home. Due to this, and a few other factors, many children in the UK arrive at secondary school with a reading age shockingly below the national average. Trinity Academy Halifax (TAH) is

a prime example of this – overall, students arrive at TAH below the national average for percentage achieving the expected standard in reading and writing. The Education Endowment Foundation (EEF) states that 25% of students nationally began secondary school in 2018 below the expected standard for reading. In 2018 at TAH, this was 29%. In 2019 at TAH, this was 34%.

TAH has literacy right at the heart of its priorities and does a tremendous amount of work to improve literacy and therefore create more opportunities for its community of students. There can be no doubt that for many of our students, 49% of which in Year 7 arrived with a reading age of between 6 and 9 years old, what we do improves student literacy and improves students' overall access to the curriculum.

For example, literacy provision is strongly embedded into the English curriculum: students in Phase One (Years 7 and 8) complete 'Star Reading' tests every term, which generate a zone of proximal development score which guides students to read books suitable for their ability

(Executive Summary, 2019); there are various clubs, such as handwriting club, and competitions that encourage students to read and write; at teacher level, we have termly CPD led by an appointed literacy specialist in school and have recently created roles for 'Literacy Ambassadors' in each department.

Research undertaken and findings of research

To have high literacy levels in all curriculum areas, vocabulary is very important. In language learning, vocabulary is everything. A study in England compared students from schools serving disadvantaged areas with students from more affluent backgrounds, and found that when it came to standardised language tests, the biggest differences were in vocabulary (Gross, 2018). At TAH we have a cohort that is 41% Student Premium, and the percentage of students achieving the expected standard in reading across all year groups is below the national average

(Executive Summary). To link this to the context of foreign language acquisition, Courtney et al. maintain that native language literacy skills have a strong influence on L2* outcomes, and that the foundation it provides for learning a second language becomes increasingly influential already by the end of Year 7 in schools (Courtney et al., 2017). This, in my opinion, indicates that there is a correlation between socioeconomic status and literacy, and as a result a link between socioeconomic status and L2 acquisition.

Research reveals that the seed is planted at a very young age, and that the amount of vocabulary a child is exposed to at a young age can have a long-term effect on the development of their literacy. Hart and Risley (1995) coined the term the '30 million word gap' referring to the difference in total words experienced by a child from a 'welfare family' and a 'professional family'. The issue does not end there; not only do students from disadvantaged backgrounds typically have lower literacy levels – a 2018 study by the National Literacy Trust found that people



*L2 – This refers to the speaker's second language.

with low levels of literacy are more likely to live in deprived communities – but because of this deficit, students are also likely to accumulate new words at a slower rate (Hart and Risley, 1995). This connection between levels of deprivation and vocabulary is poignantly summarised by the General Secretary of the Association of School and College Leaders, Geoff Barton: “In reality the word gap will depend on your circumstances rather than your choices – your home, your family, the richness of language and relations, the presence of books and conversations, the habits you form as you grow up” (Barton in Richardson, 2018).

In my opinion, learning a language at school, both the knowledge gained and the way it is instructed, have clear benefits for other curriculum areas. In a language classroom, vocabulary is taught explicitly, whereas in many other areas organised instruction can be more limited (Quigley, 2018).

How to bridge the word gap is a priority of TAH in terms of improving the outcomes for our students. It is personal priority and a departmental priority because, as the aforementioned research shows, the amount of native vocabulary one acquires therefore impacts the learning process for L2. Quigley argues the importance of cultivating ‘word consciousness’ (Quigley, 2018) and teaching explicitly the morphology of words, in order to create a curiousness that helps learners grow to understand and learn more words. This is supported by the second recommendation of the EEF summary of recommendations for improving literacy in secondary schools, which not only recommends prioritising the teaching of Tier 2 and Tier 3 vocabulary that students are unlikely to hear outside the classroom, but also that teaching etymology and morphology will help students remember new words and make connections between words (EEF, 2019).

I researched this barrier and designed an intervention to address it within my classroom, with the intention of improving my personal practice using an action research model, by investigating

and focusing on an issue raised and owned by me as an individual (Kemmis and McTaggart, 1992). Elliot puts forward the view that, fundamentally, action research is rooted in a desire to improve practice rather than to produce knowledge (Elliot, 1991). Of course, I was unable to actually undertake or evaluate my intervention, however, given that action research is initially localised within the researcher’s sphere, I, as the researcher, am still aiming to improve my teaching.

What you want to implement

I decided that the focus group of my intervention would be my Year 10 class. There is only one Year 10 class in TAH, therefore there was no risk of either advantaging or disadvantaging one group over another, which ethically speaking was a benefit to choosing this group.

The SEN team at TAH has produced several high-quality resources to aid the literacy development of students who are in one of the catch-up literacy programmes. They focus heavily on reading comprehension and understanding English grammar by using cleverly written reading texts, dual coding and questioning that is divided into sections, such as comprehension and language devices and techniques. Over the last few months, I have been looking at and discussing literacy interventions for weaker students. The SEN team have heavily invested in creating literacy-promoting resources for TAH’s weakest students, but with a large proportion of the whole school achieving less than the national reading age, I wondered if their techniques couldn’t be employed more widely in my own subject and beyond.

Use of the Frayer model – a strategy developed by Frayer, Fredrick and Klausmeier (1969) to assess ‘concept mastery’ – is listed as a vocabulary teaching strategy in lessons on TAH’s Executive Literacy Summary. The strategy has been proven to improve understanding of concepts when compared to more textbook approaches and, more poignantly, to improve the acquisition

of vocabulary when compared to classroom instruction alone (Greenwood, 2002). However, it is not something we have practised explicitly in the MFL classroom. I decided that for my intervention I would take inspiration from the Frayer model and the SEN team, and create a resource that was adapted to a foreign language learning environment.

A typical Frayer model usually includes a grid with boxes for definition (in student's own words), a features box and two other boxes for examples and non-examples. Figure 1 shows the structure

that I designed for implementing new vocabulary in my intervention. I decided to select ten words from across the AQA vocabulary list to focus on with students. At the start of each lesson I would have provided students with a Vocab Lab sheet and a new word, discussed the definition with the group, and students would have completed the rest of the grid independently. When I would have introduced this for the first time, I would have gone through each box individually, explaining how to fill them in, to address any misunderstanding from the start.

Vocab Lab |

<u>Definition</u>		<u>Use in a sentence (add picture)</u>	
<u>Modifications</u> Can I modify this word? Can I conjugate it? Modify to past, <u>present</u> or future tense. Make it singular, plural, masculine or feminine. Add a prefix or suffix.	<u>Target Word</u>	<u>Type of word (noun / verb / adjective)</u>	
<u>Break it down (root, prefixes and suffixes)</u>	<u>Words that relate</u>	<u>Synonyms (English or French)</u>	<u>Antonyms (English or French)</u>
<u>What does it sound like?</u>			

Figure 1: The 'Vocab Lab' – MFL tool for learning new vocabulary



I thought carefully about the ten words that I selected, with the vocabulary gap at the forefront of the decision-making process. As previously mentioned, children begin school with widely different vocabulary size and depth, and a poor start has a cumulative effect (Gross, 2017). It is estimated that “while the average primary-aged child learns new root words (words like ‘rock’ from which related meanings – rocking, rocky and so on – can be derived by adding prefixes and suffixes) at a rate of about 1,000 a year, the 25% of children with the poorest vocabularies acquire roughly 400 fewer root meanings each year than their average peers” (Gross, 2017).

When looking at English modern academic language, one finds that it is ‘indebted to’ the influences of Latin, Greek and French. Within such lexicon one finds a significant number of cognates between modern academic English and French; examples include: amorous, commence and equestrian. Thus, a ‘vocabulary rich’ student might come across the word ‘coupable’ in French and, knowing the word ‘culpable’ in English, be able to infer the meaning ‘guilty’ (Quigley, 2018). I have noticed on many occasions across all year groups a lack of English vocabulary that would assist L2 acquisition, for example, in Year 7, students are taught that ‘tranquille’ means quiet. There was variation between classes, but I generally found that most students either were not familiar with the word tranquil in English or had not made the link between the words.

To understand more clearly the types of words that students were unfamiliar with, vocabulary can be categorised into Tiers. Tier 1 vocabulary is high frequency language that students use day to day and is more conversational. Tier 2, which according to Didau is the greatest barrier to learning for students who are ‘word-poor’ (Didau, 2014), is more sophisticated and academic, and appears frequently in written texts. Tier 3 consists of more academic subject-specific vocabulary, for example photosynthesis, that is often taught

more explicitly. Didau argues that for closing the word gap, Tier 2 vocabulary learning must be a priority, describing these words as having ‘most instructional potential and highest utility’ (Didau, 2014). In my opinion, it appears that there is a clear reciprocal benefit to closing the word gap for the ‘less experienced language users’ (Reedy, 2018) at TAH because it is this Tier 2 vocabulary that is so often the cognate in French. Thus, when selecting words for my intervention, I chose several words that, verbs in particular, had an English cognate that was Tier 2.

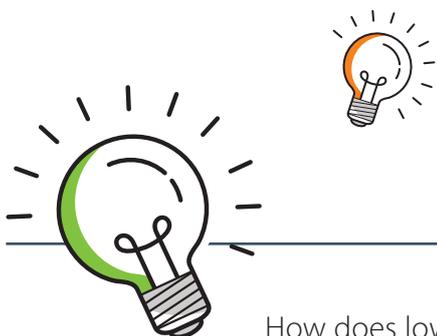
An experiment from 2009 found that when students were provided with ‘extended instruction,’ whereby the word was presented in a story, they learned and retained vocabulary better than students who have been given a simple definition of the same word (Gross, 2009). With ‘extended instruction,’ children were asked to pronounce the target word, raise their hand when they heard it in a story and later were given opportunity to use the word in different ways (Gross, 2009). This led me to add the ‘Use in a sentence’ box to the Vocab Lab grid and supports the rationale behind also using the key words in lesson texts.

A study in Worcestershire schools found that words taught using an approach that went into real depth about the actual meaning of words, led to greater retention of word meaning than words taught in the conventional method of introducing them with one explanation (Gross, 2017). Research has also shown that teaching new words using techniques such as student-generated definitions, leads to greater student gains in vocabulary knowledge than those who worked exclusively with word definitions (Bos and Anders, 1990). By allowing students the space to write their own definitions of the word on the Vocab Lab, I aimed to ensure deeper understanding and greater retention. I decided to add the ‘What does it sound like?’ box in part due to the Key Stage 3 National Strategy for Literacy, that suggests breaking words into their constituents, that is to say, ‘the root word and any affixes’ (KS3 Strategy, 2002).

Potential benefits/outcomes

One thing that is always a challenge to combat in the foreign language classroom is a feeling of lack of time. Had my intervention been anywhere near as successful as I'd hoped, then students would have gained a deep understanding of several key words on the GCSE syllabus and improved their ability to approach further new vocabulary by being able to spot patterns for example or identify synonyms. However, I must admit that, especially in the wake of Covid-19 and school closures – meaning that students will have lost countless hours of meaningful language practice – this success might have felt like a drop in the ocean. According to Milton (2006), by the end of a GCSE course it is estimated that at GCSE higher level the vocabulary size of a successful student should be 2,000 words. However, I would hope that by encouraging students to think about vocabulary more broadly and more deeply, their ability to learn in the future will be improved. Using an adapted version of the Frayer model, we can introduce new vocabulary into classrooms and broaden students' foreign lexicon. The benefits of this versus giving a simple definition, mean that students will deepen their understanding, increase their retention and improve their grammatical understanding of key words from the GCSE syllabus.

When used in a foreign language classroom the benefit of this instruction to foreign language acquisition and native language is reciprocal. It is possible that by implementing this model of deeper vocabulary teaching across other curriculum areas, using carefully chosen key Tier 2 words, we can improve literacy and further unlock student potential.





Embedding career links into the curriculum

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Context

The information and guidance (IAG) support for Year 8 options is launched between February and March, informing students, parents and carers what the different subject options entail.

The option choice is usually guided by the student's home life – typically someone from a working-class background is more likely to opt for a vocational route, whereas someone from a middle-class background is likely to select an academic option (Jephcote and Abbott, 2005, p.182).

Trusting the advice imposed by parental guidance can be problematic, as those from affluent upbringings usually project higher career aspirations on to their children (Bandura et al., 2001), whereas families from a lower socioeconomic standing are less likely to hold knowledge toward particular career routes (Wikeley and Stables, 1999).

Another challenge when selecting options is whether students and families understand the subject content and what opportunities this could lead on to. This decision can limit future choices at a young age (Sullivan et al., 2010, p.5). AAT (2013) conducted a study into apprenticeships,

identifying that 63% of parents don't understand apprenticeships well enough to be able to explain them, supporting Sullivan et al.'s (2010) idea of 'do students and families know enough to inform their choice?'

The curriculum and qualifications have evolved in keeping with technological advances and industry developments. Inevitably, it is unlikely that parents can effectively advise on what a certain course has to offer and career choices.

This idea can apply to Technology, as parents and carers often project rigid perceptions of the subject, based on their personal experience of D&T that they experienced at school, using dated terminology such as 'wood tech' that often has an undertone of masculinity attached, additionally, assuming the subject is limited to careers in construction. These inaccuracies can be damaging toward the subject as it can lose a large proportion of the Year 8 audience. Russell (2016) discussed the absence of female interest in D&T as being rooted to societal pressures, avoiding situations that make them stand out from their peers.

To overcome this barrier, I decided to research strategies to improve the desirability of the subject within the realms of my classroom, by embedding career links within the curriculum. This could entail using materials or pedagogic practices to communicate to students how the subject relates to the world of work.

Due to lockdown restrictions my research is untested. Instead this strategy is merely a suggestion, and I hope in the future I can comment on the impact it has had.

Careers education

Careers education has dwindled due to shifts in Government policies and funding. The eradication of the Connexions service by the Coalition Government has not helped careers education in general.

Ofsted (2020) discussed the importance of exposing students to different career prospects early on within their school career, and that doing so at GCSE is doing the students a disservice, as they felt it was too late.

Trinity Academy Halifax (TAH) provides Careers Education, Information and Guidance (CEIAG) programmes throughout the progression of a student's academic career, which offer a range of different opportunities to engage with employers and introduce the students to Post-16 routes into further education or the line of work, among covering other areas of careers education.

Although these opportunities are there for students to participate in, it is not always clear to students how the subjects they study can help them to achieve a good job in the future.

Careers education has three main areas of focus: to provide information, advise and offer guidance. As a subject specialist you are likely to be passionate about your area of expertise and

therefore enthusiastic about how it can be applied to areas of work. However, it would be inept to attempt to steer students toward a specific career, narrowing their career options (Watts et al., 1996). The careers education you provide is about equipping students with an understanding of their subject choice and respecting their choice, showing no bias or favouritism toward a particular education or work option.

According to the Gatsby report, including good career guidance about careers in the curriculum can influence personal efficiency and improvement in motivation and self-esteem; career readiness having an improved understanding of occupations; educational outcomes and improvement in attainment and attendance (Collins and Barnes, 2017).

It is argued that careers education delivered by a non-specialist can be weak, compromising the subject as the information provided can be dated and stereotypical (Reiss and Mujtaba, 2017). In some instances, the provided CEIAG delivered in schools can provide misinformed information regarding opportunities available to young people, relating predominantly to vocational courses (Morris, 2004).

The importance of STEM career links

Technology is an integral part of STEM (Science, Technology, Engineering and Maths). The Government has indicated within their statutory guidance that all teachers should link curriculum learning with careers; whereas STEM teachers need to ignite the interest of students toward career paths that don't currently exist.

In an SPIRES study, it was highlighted that students do not need convincing of the importance of STEM, they need confidence instilling in them that these types of careers are

reachable for them, and that they are not just for the 'brainy' students (Reiss and Mujtaba, 2017).

Students, parents and carers can have a narrow outlook of where certain subjects can lead, for example, studying English only leads to a career in writing or teaching. From this they assume the qualification is not relevant to them, disregarding the cross-curricular links and transferability of the skills.

I lightly mentioned the gender imbalance within Technology. Women are tremendously under-represented within the UK's Technology workforce. Twenty-three percent of people working within STEM roles across the UK are female. This imbalance is inevitably going to impact the product outcomes, as they are devised through a one-sided point of view. Research indicates that girls are put off the idea of pursuing STEM careers for various reasons, such as gaining better grades in other subjects, the fresh hold to continue studying STEM subjects in higher education is exceedingly high, finding STEM subjects uninteresting, and not seeing a correlation with the STEM subjects and the future careers they plan to choose (PWC, 2017).

This pattern is continuous, this stereotypical idea that Technology is not for girls. Research is pointing the finger toward teachers for not providing enough guidance on careers in Technology. There is also the discouragement of girls not wanting to be in a male-dominated environment.

Embedding careers within the D&T curriculum

I discussed my STEM interest with a colleague in Science as I initially wanted to improve the uptake for the subject. They explained how they related subject content to relevant careers (areas of the curriculum in particular that students can't always grasp the significance, for example, "Why do I need to learn algebra, I'll never use it!") and in doing so, they observed an improvement within the lesson of unmotivated students starting to

engage more with the content, linking to Collins and Barnes' (2017) idea that careers education can improve self-esteem and motivation.

My proposal is to open the lines of communication with students which requires minimal planning but hopefully has high impact in return. Subject teachers delivering careers content during lessons, for example, in Maths teaching personal financial planning skills, demonstrating how mathematical techniques apply in the real world; providing both career learning and enhancing the subject learning.

This is planned into the scheme of work, by relating the different projects to associated job roles; through starter activities; posing questions that relate to what the different roles entail and what do you think someone in this position earns; discussing local positions and entry requirements.



Research suggests that students who understand the monetary value of STEM job roles displayed more of an interest, additionally, spending time comparing graduate entry salaries and discussing different entry routes into the professions.

Proposed outcomes

Overall, I would like students to have a clear understanding of the subject and where it can lead in the future. This understanding will then hopefully help inform the options process in Year 8, equipping students with the knowledge to be able to explain to their families the significance of the subject.

Additionally, I relish the idea of more girls selecting Technology at GCSE, based on future career prospects that the subject relates to, although I feel more intervention needs to be implemented to improve the uptake. This is an area I am currently concentrating on, and I am looking forward to implementing targeted strategies when students return to school.

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The importance of self-explanation in Mathematics - The link between cognitive load theory and explicit instruction

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Born out of John Sweller’s research on problem solving in the 1980s, cognitive load theory is a way of explaining how students learn new information by examining the complex relationship between the working and long-term memory. The working memory is limited in its capacity and duration, meaning it can be easily overloaded. The more overloaded the working memory is, the more difficult it is for new information to be transferred into long-term memory. It is my belief that teachers should aim to improve student retention by adapting their practice to cater for the limitations of the working memory.

Explicit instruction is a teaching model designed to accommodate for cognitive load theory and the constraints of the working memory. Worked examples are a widely used model of explicit instruction within Mathematics; they offer students a step-by-step solution to a problem or task (Ayres, 2012). I decided to bring this explicit model of instruction into the beginning of my Maths lessons, as this is when new material tends to be introduced. As a result, students learn the new material by studying fully worked examples before trying to discover the solution themselves. This is not to say that problem-solving tasks are ineffective, but they can impose a heavy cognitive

load, which does not assist in learning if introduced too early within a topic (Sweller, 1988).

To evaluate the impact of this approach, I selected a series of three lessons from my mixed ability Year 7 class. This would enable me to see whether this approach was applicable to varying attainment levels. The content block underlying the series of lessons was place value and ordering numbers.

Figure 1. Explicit model of instruction, worked examples

Worked Example	Your Turn
<p>What number does this place value chart show?</p> <p>The number is...</p> <p> <input type="checkbox"/> Tens <input type="checkbox"/> Ones <input type="checkbox"/> Tenths <input type="checkbox"/> Hundredths </p>	<p>What number does this place value chart show?</p> <p>The number is...</p> <p> <input type="checkbox"/> Tens <input type="checkbox"/> Ones <input type="checkbox"/> Tenths <input type="checkbox"/> Hundredths </p>

The worked example (Figure 1) was modelled using the following structure:

1. Ask students to sit silently and listen carefully to my explanation.
2. Describe that the place value chart shows us the value of the digit in relation to its position on a number line.

3. Count the number of counters in the tens column and write this number in the fill-in-the-gaps section for the number of tens.
4. Repeat the above for the ones, tenths and hundredths columns.
5. Read the question: what number does the place value chart show?
6. Read out loud that I have 0 tens and repeat for the ones, tenths and hundredths. Each number is written down one after another, until the answer of 0.57 is written on to the board.
7. Ask students to copy the worked example into their class books.

Students are then directed to attempt a similar task independently and be prepared to explain their answers. This part of the modelling phase serves several purposes:

- By implementing the Teach Like A Champion (TLAC) technique of ‘cold calling’, students are aware that anyone could be asked to contribute and should be ready to share their thoughts (Lemov, 2015). Not only has this helped to maximise class engagement but, through the implicit reference that it shows I care what every student thinks, it has helped to build a positive classroom culture.
- It forces me to re-explain concepts that students have not appeared to grasp.

Carefully planned, I felt this model was effective; it provides students with a structured and systematic way to approach the task and, supported by the expert’s explanation, gives students the greatest opportunity of understanding a concept (Barton, 2018).

The effectiveness of the model is also linked to better tackling of misconceptions. Students

are more likely to acquire misconceptions via less teacher-led approaches, due to the lack of guidance (Kirschner et al., 2006). Amy MacDonald discusses a commonly held misconception in the place value of decimals in her *But What About the Oneths* article. The article highlights how students can mistake the first place after the decimal point as having the value ‘oneths’ and, as a result, answers concerning place value would constantly be off by one decimal place (MacDonald, 2008). The worked example (Figure 1) helps students visualise the place value of decimals. Additionally, it gave me the opportunity to spell out why we do not assume symmetry either side of the decimal point. Prior to the lesson, I had practised my modelling to ensure I was fully prepared for this explanation.

The role of germane cognitive load

I planned to expose poor-quality prior knowledge through diagnostic questions: a type of multiple-choice question where every wrong answer is chosen clearly to reveal a misconception.

Figure 2. Diagnostic question, comparing decimal numbers

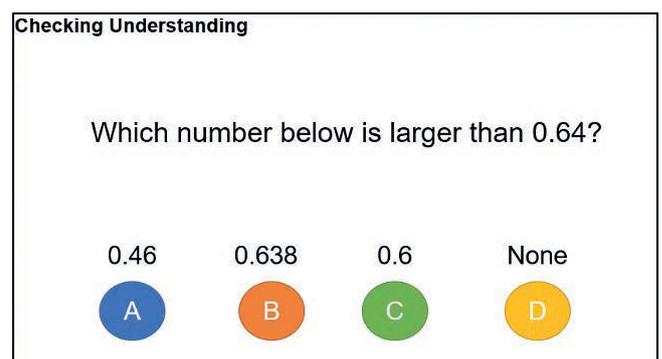


Figure 2 is an example of a diagnostic question that was used in the second of my series of lessons on comparing and ordering numbers. The question is brief and covers the single concept of comparing decimal numbers. Each answer gives me valuable information, as the incorrect answers were designed specifically to expose key misconceptions.

Diagnostic questions as an assessment for learning technique appeared to do the trick with helping to expose poor-quality prior knowledge, but what about exposing good-quality prior knowledge? Good-quality prior knowledge can be exposed through self-explanation; up to this point I had not planned enough opportunities for students to naturally engage in self-explanations, which meant that the learning was not as effective as it could be (Barton, 2018).

Reflecting on my own practice brought me to a realisation that I had inadvertently held the assumption that Barton (2018) identifies: students will use their spare working memory capacity for things that contribute toward learning. The latter can be understood as germane cognitive load: load imposed on the working memory through learning. Germane load was first described by Sweller et al. (1998). They, and now many other scholars, suggest that teachers should promote germane load to achieve effective learning.

Taking the time to pause, think and notice, should not only help expose good-quality prior knowledge, but it should also aid the promotion of a student's germane load.

How often do we take the time to pause, think and notice?

The type of worked examples that I have discussed up to now limited the opportunity for students to self-explain their answers. However, I came to understand that including a reflective activity into lessons is a key ingredient in promoting a student's germane load. This activity should enable students to think about why you move from one step to the next and why the steps are sequenced that way. I modified my initial worked examples so that self-explanation was a prominent feature in my Maths lessons. Inspired by Barton (2018), these were named 'Supercharged Worked Examples.'

In the third of my series of lessons, significant figures were introduced to students using a model of explicit instruction (Figure 3). This allowed me to ask students to pause and consider: how did I move from the previous step to the next step and why? This would be done on a line-by-line basis when there are several stages to the problem.

Figure 3. Explicit model of instruction, supercharged worked examples

Worked Example	Reflective Process	Your Turn
<p>450 This number has <input type="checkbox"/> significant figures.</p> <p>The first significant figure is <input type="checkbox"/>.</p> <p>406 This number has <input type="checkbox"/> significant figures.</p> <p>The first significant figure is <input type="checkbox"/>.</p>		<p>400 This number has <input type="checkbox"/> significant figures.</p> <p>The first significant figure is <input type="checkbox"/>.</p> <p>40 This number has <input type="checkbox"/> significant figures.</p> <p>The first significant figure is <input type="checkbox"/>.</p>

Students would be learning how to round to one significant figure later in lesson three, so it was important that the concept of a significant figure was introduced in the initial phase. Examples (Figure 3) were created purposefully so that they all had 4 as the first significant figure; the reflective process appeared to help students grasp the idea that different numbers can have the same first significant figure. As a result, this led to some students being able to self-explain later why you cannot determine exactly what a number originally was after it had been rounded to one significant figure. I do not think I would have achieved this level of understanding without encouraging students to pause, think and notice.

Worked examples 'supercharged' with a reflective activity should, in short: encourage discourse around good prior knowledge, which helps to support lower-attaining students (Tay, 2018); aid the promotion of germane load, as students are encouraged to think more thoroughly about the procedure they have just observed; and help build self-confidence naturally by achieving early results (Didau, 2016).

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Academic discipline of pedagogy

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The exploration I have undertaken through my work with Teach First so far has centred around the academic discipline of pedagogy. I have questioned how the utilisation of various pedagogical strategies, and the application of different learning theories, can inform my teaching to support students in their development toward becoming effective scientific learners. My starting point was to examine the various learning theories. While behaviourism and cognitivism continue to influence teaching practices, it is constructivism which seems to dominate educational philosophies and impact modern teaching and learning processes. Lev Vygotsky, the father of the constructivist social learning theory, saw learning as a socially mediated activity. Once students have developed lower mental functions, they will eventually develop higher mental functions (e.g. problem-solving skills and memory schema) through social interactions with peers or adults (more knowledgeable others). Central to Vygotsky's theory is the idea of the zone of proximal development. This idea stipulates that a child's potential for cognitive growth is based upon what they can accomplish alone, and what they can accomplish with the support of more knowledgeable others (Vygotsky, 1980).

Cooperative learning

By considering this model, we must consider peer-to-peer interactions as an important element of learning, and cooperative learning methods as important elements of teaching! Research has consistently demonstrated how these cooperative learning strategies have led to student improvements in three main areas: attitudes and motivation toward the subject, positive classroom environment and academic attainment of students (Slavin, Hurley and Chamberlain, 2003). Aside from these academic improvements, there have also been personal improvements, with a reduction of student anxiety, an improved ability to view situations from others' perspectives, more positive peer relationships and higher self-esteem, all linked to group work interventions (Felder and Brent, 2007). Working in a cooperative environment allows students to explore concepts and ideas in more depth. They can freely discuss differing perspectives, they can support their own ideas and challenge others. This synthesis of information will allow students to construct deeper and more conceptually sound mental schemas than they would have constructed alone. The EEF has recognised these benefits

in their guide on metacognition, and self-regulated learning group work is viewed as an effective way of building knowledge and understanding metacognitive strategies (Quigley, Mujs and Stringer, 2018).

Across the world, these benefits are being recognised, and the amount of group work taking place in classrooms has been steadily increasing, however, there is a gap between the potential of group work and its actual influence in real classroom environments. The Social Pedagogic Research into Grouping (SPRinG) project was designed to address this gap by initiating the largest UK quasi-experimental study on the positive effects of group work to date (Blatchford et al., 2003). They found key principles which contribute to the effectiveness of group work. These included:

1. A relational approach to enhance the dynamics of the group, this could be done by using rules for communicating and behaviour.
2. Arranging the classroom in a way that encourages group work, by clustering desks to increase learner's proximity.
3. Use tasks which are conducive with collaborative learning, rather than individual learning.
4. The role of the teacher facilitates autonomous group work, by providing enough support and instruction, but giving students autonomy over their conversations. People are not born knowing how to work in a team. Throwing students together in a group with no guidance will not accomplish the notable benefits of group work. Only by following the key principles to effective group work and supporting the students in their groups, will the benefits be accomplished.

So, while the key principles that contribute to group work's effectiveness have been established, the need for practical strategies and structures that allow for group work need to be recognised. Spencer Kagan (1994) developed a range of strategies for cooperative learning. Some examples include: numbered heads together, rally table, think-pair-share and four corners. One technique that has received a considerable amount of attention is the jigsaw technique. This is known as an open-ended strategy, which encourages students to interact and elaborate on their ideas surrounding complex subject matter. Studies have consistently shown how, when used in conjunction with effective group work principles, effectively enhances student achievement in a range of subjects, including Science.



Putting theory into action

In terms of my own emerging teaching and learning philosophy, the benefits of group work as a way of improving social, communicative and academic outcomes in order to positively impact student learning in Science inspired me to trial this for myself with my Year 8 classes. I planned to investigate this within the Carbon Cycle topic, a complex interaction that exists between trophic levels (producers, consumers and decomposers), the processes transforming carbon (photosynthesis, respiration, decomposition), carbon pools (atmosphere and biosphere) and hierarchical levels (from atoms in carbon dioxide to observable organisms, as in plant growth). I planned to approach the teaching of the first class in a traditional nature, where I delivered the content to the whole class, conducted some AfL using Hinge questions, before setting the students off on independent tasks. For the second class, I planned to approach the teaching from the modern standpoint, utilising the jigsaw method. As deemed necessary in the SPRinG project, I planned to initially talk with students about how to work effectively in a group. This would begin with their own suggestions for effective group work and finally a summation of ideas, with reference to respecting the opinions of others, encouraging contribution from all and working together toward the task. I planned the groups in which students were to be placed, and at this point students would receive a component of the carbon cycle in which to become an expert (e.g. photosynthesis, respiration, combustion, fossilisation). The students were to develop their understandings of this concept independently, before joining their group to put these processes together. I planned a group task for each group to complete in which information from each separate process would be needed to link the cycle together.

Having never tried the jigsaw strategy before, there were a few challenges to its trial. The novelty of this new task meant additional behaviour management strategies were needed, highlighting the importance of embedded routines in the classroom. This could have been mitigated by clearer instructions and a smoother transition into the class, which would come with more familiarity with the method on my part! This strategy also involves quite extensive planning, as seating plans, individual attainment, groupings and content breakdown all have to be considered. However, the benefits to this method were notable. The students involved in the jigsaw task appeared engaged with the content of the lesson. They were debating the tasks, correcting each other and explaining the concepts, constructing their own understanding of the topic. Due to the nature of the strategy, each student is a valued group member and participated in the group discussions with insightful knowledge. I even noted a small academic benefit to such a method.



Reflection

While this exploration into pedagogies has encouraged me to implement more student-focused, cooperative learning strategies into my teaching, the extent in which I can embed my philosophies into practice has been limited. These lessons were conducted when Covid-19 restrictions were very much in place. This made it a challenge to implement the various effective pedagogies discovered through the literature I had reviewed. For example, I could not move the students and group them, as I'd ideally liked to; I could not give individual feedback to specific conversations or circulate the room. This point draws on a much broader issue that affects every student in the UK at the time of writing. The UK has entered its second national school closure. Online learning has been a consistent feature of many students' schooling for almost a year now. While the measures in place continue to deliver the curriculum effectively to students as best they can, group work has been sacrificed. As it stands, learning-based peer-interactions are restricted to the use of the chat function during live lessons hosted on Teams. As group work has demonstrated its worth as an effective pedagogy, the negative effects of the restrictions on students' academic and social outcomes have yet to be revealed. Additionally, my own ability to try new strategies and perfect the ones that I have trialled has been restricted, and I myself may have become a more experienced, effective practitioner had these restrictions not been in place. Beginning teacher training in 2020 has been an interesting journey and sometimes we have been faced with restrictions limiting our own ability to develop. If anything, this time has given me the opportunity to consider the variety of approaches to teaching that exist, and how these can be utilised when we eventually return to a normal classroom environment!

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Student vocabulary acquisition

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Context of study:

Why is vocabulary important?

Vocabulary is continuously regarded as fundamental to the education system: a tool that ‘embodies and communicates concepts’ (Ofsted, 2019), ‘a currency for life, experience and success’ (The British Cohort Study, 1970) and ‘a convenient proxy for a whole range of educational attainments and abilities’ (Hirsch, 2013). So why is it then, that as soon as a child becomes of secondary age, the explicit, daily teaching of vocabulary is almost neglected and instead replaced with an abundance of analytical and evaluative skills? This research article will therefore aim to highlight not only the importance of the explicit teaching of vocabulary, but also how vocabulary acquisition is at the heart of success across the entire curriculum.

Research conducted by Hart and Risley (1995) has suggested that by the age of three years old, there is ‘a vocabulary gap’ that consists of approximately 30 million words between disadvantaged students and their more vocabulary-rich peers. Although the methodology used in this study has been unpicked and criticised by various commenters and academics alike, more recently it has been found that “the correlation between vocabulary

size and life chances is as firm as any correlation in educational research” (Ofsted, 2019). Therefore, even though this initial, inconceivable statistic was based from just one study consisting of only 42 families almost 40 years ago, the broader notion that a wider vocabulary can increase a person’s life chances has been heavily supported both prior to and succeeding this study. For example, in The British Cohort Study of 1970, which tracked 17,000 people as opposed to the 42 families in Hart and Risley’s study, it was found that there was a strong correlation between a child’s vocabulary at the age of five, and their subsequent ‘life, experience, jobs and qualifications’ (Parsons, 2014).

Students need to know at least 95% of the words that they read in a text to be able to comprehensively read, and understand, any information that they are given (Laufer, 1989). Therefore, if a student’s vocabulary is not rich enough to reach this threshold, they will inevitably be left behind to suffer in silence – especially if a lesson includes a range of complex vocabulary or difficult texts. Therefore, as a school with a substantial amount of ‘disadvantaged students,’ it is crucial to adopt a range of strategies to prevent this ‘vocabulary gap’ from further affecting the lives and futures of our students.

At Trinity, improving student vocabulary across the curriculum is one of the key targets within our school improvement plan, which is part of the wider strategy that has been adopted on 'whole school literacy'. The need for such prioritisation can be clearly seen in the most recent Star Reading results (February 2020); for example, out of 23 students in my 'middle ability' Year 9 set, only six students received a score that was equal to, or above, their expected reading age. Subsequently, this means that 17 students are currently performing below their expected level – and unfortunately, this pattern is relatively consistent across the entire year group. Therefore, a curriculum-wide intervention should be implemented to adequately equip our students, who are already at a statistical disadvantage upon entering our school, with the vocabulary required for a successful future.

Academic research and findings

Before I began my research into vocabulary acquisition as a barrier to learning at Trinity, I had a few questions in mind:

- Should teachers 'explicitly' teach vocabulary?
- Is teaching vocabulary predominantly an English domain?
- What texts should students be exposed to in order to facilitate their acquisition of more challenging words?



Firstly, instead of asking "Do teachers explicitly teach vocabulary?"; the question which I should have asked is "If vocabulary is explicitly taught, do teachers use traditional instruction or what Beck has referred to as robust instruction?" (Beck, 2002). Robust instruction involves the explicit teaching of vocabulary using a variety of active learning methods, which incorporate both the 'contextualisation and de-contextualisation' of words (Beck and McKeown, 2013). Within such instruction, Beck emphasises the need for students

to not only contextualise new words, but to also be able to 'de-contextualise' them too. It is argued that de-contextualisation is just as important, if not more important, than the contextualisation of new words, as it facilitates the fluidity of students' vocabulary acquisition across subjects.

Traditional instruction, on the other hand, incorporates learning new vocabulary through much more 'passive' and 'traditional' means, such as learning dictionary definitions, applying synonyms and antonyms, and looking at the morphology and etymology of words. Although these strategies can be beneficial in some respects, according to Beck and McKeown, they should be integrated into a more holistic strategy that encompasses a wider range of active learning to facilitate the transitioning to the long-term memory (Beck, 2013).

In addition, similarly to the de-contextualisation element in Beck's study, Quigley proposes that a student must become 'word conscious' to be able to read effectively across all their subjects. Therefore, it must be argued that teachers should become more aware of cross-curricular vocabulary and the language used in other subjects (Quigley, 2018). It cannot be denied that there is one thing that all subjects have in common: vocabulary – and particularly, subject-specific vocabulary. Therefore, the primary focus of this investigation is to develop an approach that will improve student vocabulary acquisition across the entire curriculum.

This cross-curricular position has also been supported by Dan Willingham in *The Reading Mind*, who further adds the use of non-fiction texts to be invaluable to student progress across the curriculum due to their inclusion of advanced and complex vocabulary. He claims that "vocabulary and awareness of communication is just as important in Science as it is in an English lesson and the level of vocabulary is extremely complex" (Willingham, 2017).

Evaluation of findings: Which approach for Trinity?

The most influential approach, and the one that most appropriately aligns with the Trinity ethos, is Beck and McKeown's 'Robust Instruction' from their book *Bringing Words to Life*. As stated earlier in this article, Beck and McKeown believe the key to successful vocabulary acquisition is down to providing explicit, 'robust' instruction. One of the key principles established in this research is the view that children use dictionaries badly; from finding the word itself to deciding which definition applies for their intended use, it is clear that it is a struggle from the start. As supported by Miller and Gildea (1985), it is evident that explanatory teacher-led definitions are much more holistic and effective.

Furthermore, in their book *Bringing Words to Life*, Beck and McKeown also divide vocabulary into three tiers. Tier 1 consists of the most basic, everyday words that students are commonly familiar with; these words generally do not have multiple meanings. Tier 2 words are high-utility academic words that students are likely to encounter across

different subjects and contexts. Finally, Tier 3 comprises of subject-specific academic language.

Arguably, the words that would most accurately constitute Trinity's 'target words' are those in Tier 2, as these general academic words not only add a layer of complexity to a student's vocabulary, but also apply across the disciplines. In addition, as these words 'move and shift' between subjects, it will require teachers to move away from traditional methods in order for students to be able to 'de-contextualise' the new words that they are taught and apply them to different situations. Therefore, the 'fluid' nature of such Tier 2 words assists Trinity's vision of enabling wider communication between subject areas and equipping students with a developed vocabulary for the future.

Moving forward: Word maps

In accordance with Beck and McKeown's multifaceted approach to vocabulary instruction, I decided to create a multi-layered 'vocabulary map' to integrate into my lessons that subsequently enables students to interact with new words in a variety of 'active' ways.

<p>Contextualisation: Can I use it in my own sentence?</p>	<p>Tier 2 Word:</p>	<p>Interaction: Respond to your teacher's questions / instructions regarding the word below.</p>
<p>De-contextualisation: Can this word be used in any other way? Provide an example below.</p>	<p>Student-Friendly Definition:</p>	
<p>How does this word link to other subjects?</p>	<p>Dual Coding: Draw an Image</p>	<p>Synonyms / Antonyms</p>
		<p>Repetition: Write out 5 times</p>



Figure 1 – Teacher version of the word map template.

<u>Can I use the word in my own sentence?</u>	<u>Word:</u>	<u>Respond to your teacher's questions / actions regarding the word below.</u>	
<u>Can I use this word in a different context? If so, provide an example below.</u>	<u>Definition:</u>		
<u>Can I link this word to my other subjects?</u>	<u>Draw an image of the word</u>	<u>Synonyms / Antonyms</u>	<u>Write it out 5 times</u>



Figure 2 – Student version of the word map template.

The map I have created takes into account various ‘active and engaging’ activities that I came across during my research, whilst also explicitly cross-referencing other subjects too. For example, for each new word, students are given a student-friendly definition and then are expected to engage in a range of different questions and activities regarding the word, including, but not limited to: using it in their own sentence (contextualisation); using it in a sentence out of its intended context (de-contextualisation); drawing an image of the word (dual coding); linking it to other subjects (cross-curricular/de-contextualisation); and finally, actively answering, or responding to, a range of ‘interesting’ questions or actions regarding the word (the interaction element).

This last ‘interaction’ component stems directly from Beck’s robust instruction research. This section of my word map relies on the teacher to provide individual, tailored questions to the class regarding the word and therefore will need to be adapted for each target word; these additional questions/instructions can be presented either on a whiteboard or verbally given. The more interesting these questions, the more the

students will engage with the word. For example, Beck and McKeown used the example of the word ‘commotion’ and stated that questions should be engaging for the student, such as: “Would there more likely be a commotion in the playground or the library?” By tailoring the questions to the specific lives and interests of the students, they are more likely to embed their new vocabulary knowledge into their long-term memories.

However, I have also added a slight twist to this interaction element of my word map by including the extra component of ‘actions.’ I have included this additional strategy in line with cognitive psychology to further promote the active engagement of students when interacting with new vocabulary; rather than simply answering ‘interesting’ questions regarding the word, students could also be given the opportunity to perform actions regarding them too. For example, acting them out, creating a freeze-frame or even bellowing them from the top of their lungs to the rest of the class: anything that will further consolidate their understanding of the word. So, if we look back at the example of ‘commotion’ that

Beck provided in her research, students could be asked to act out a commotion in their classroom, create a freeze-frame or even produce a short song. In accordance with cognitive research that I have come across in prior research, I believe that this would be fundamental to the active learning of students and therefore the transitioning of the word from a student's working memory to their long-term memory.

Also, from a cognitive viewpoint, one recurring message that was identified throughout the different pieces of research was to ensure the consistent repetition of 'target words' (Willingham, 2017; Beck and McKeown, 2013; Quigley, 2018). In order to ensure that students are integrating their new vocabulary into their long-term memories through repeated practice, I have devised three different strategies for the use of such word maps. Firstly, new words should be included in both starters and plenaries, and this should be interleaved throughout different weeks (Cepeda et al., 2008). Secondly, there should be some form

of formative challenge at the end of the week (e.g. writing one paragraph of a story), where students should use as many of the 'target words' as possible that they had learned that week. Finally, students should also be given the opportunity to extend their learning into the homework realm by creating a 'vocabulary diary' at home where they can make note of any 'target words' they come across outside of the classroom environment; any use of such work should be generously rewarded with achievement points as it enables and supports the 'de-contextualisation' element, which is at the core of this intervention (Beck and McKeown, 2013; 2018).

It is hoped that such intervention will enable students to develop their academic vocabulary by acquiring a collection of Tier 2 words each week. Through the process of interleaving, these Tier 2 words will become contextualised and then de-contextualised, before becoming a part of the long-term memory and thus being accessible across all subjects.





What We Have Been Reading





Cognitive Load Theory in Action – Oliver Lovell

Grace Hudson

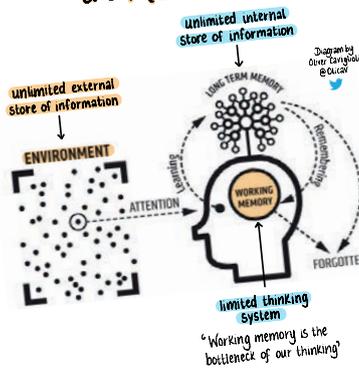
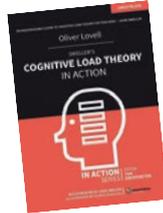
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Cognitive Load Theory in Action

Oliver Lovell @ollie_lovell



Intrinsic cognitive load

- The load associated with the core learning taking place
- This is what we want students' working memories to be occupied with!

Extraneous cognitive load

- Comes from the manner and structure of instruction
- Draws students' working memories away from the core information to be learned

The fundamental recommendation of CLT: In order to increase learning...

↓ reduce extraneous load

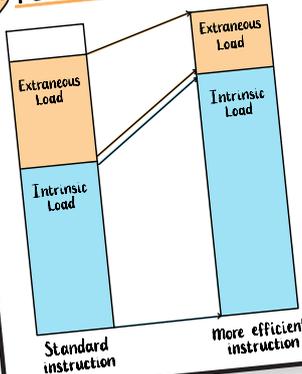
↑ optimise intrinsic load

Element interactivity

For any learning to take place, a number of elements of new information must be considered and related in working memory, and then incorporated into long-term memory

Within Cognitive Load Theory, the higher cognitive load associated with more elements and more interactions is referred to as 'element interactivity'

- intrinsic load** is optimised through appropriate curriculum sequencing
- extraneous load** is minimised by good instructional design.



Optimising intrinsic load

Pre-teaching

- Delivering a portion of the content before the main lesson, and reinforcing it through revision over time, can reduce the intrinsic load experienced by students when they attempt the final, complete task.
- Pre-teach vocabulary, characters, events, timelines, skills

Segmentation

'For learners with low prior knowledge, there are considerable advantages to providing a segmented approach, where intrinsic load is considerably reduced by providing first a task with a lower level of element interactivity followed by a more complete task with higher levels of element interactivity' Sweller & colleagues 2011

The expertise-reversal effect

- Novice students lack an understanding of how certain problems should be approached, and therefore benefit from worked examples, which provide a high level of guidance and structure
- Problem solving provides the practice that more expert students need to automate their skills

Reducing extraneous load

The redundancy effect

- Eliminate unnecessary information and do not replicate necessary information

↳ The most common form of redundancy occurs when the same information is presented in different modalities?

When information is presented simultaneously in written and spoken form, both sources of information are vying for the same working memory resources, and therefore interfering with each other.

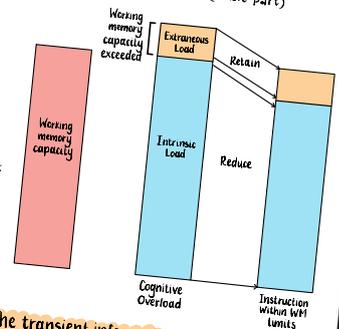
↳ Don't read from your slides!

The split-attention effect

- * Information that must be combined should be placed together in space and time.
- * Information should only be placed together in space and time if it can't be understood in isolation and is essential rather than redundant.

Sequencing & Combination

- Part-whole → building constituent skills and knowledge before putting it all together
- Whole-part → providing a general overview first, followed by more focused practice of individual segments
- * Chain forwards or backwards (part-whole)
- * Snowball (part-whole)
- * Simplify conditions (whole-part)
- * Manipulate the emphasis (whole-part)



The transient information effect

- ↳ When information disappears, and students must therefore hold it in working memory, this causes extraneous cognitive load.

The modality effect

- ↳ Present information via auditory and visual channels in tandem to eliminate visual split-attention and expand working memory capacity
- * The modality effect is concerned with working memory capacity during instruction.
- * Dual coding relates to the memory trace that remains in long-term memory after instruction.

Structure the practice

- Worked examples 'provide an expert's problem solving model for the learner to study and emulate'
- The alternation strategy
- Faded worked examples

An infographic summary of Oliver Lovell's book *Cognitive Load Theory in Action* created by Grace Hudson.





Transforming teaching and learning through talk: The Oracy Imperative – Amy Gaunt and Alice Stott

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What is it about?

This book is aimed at identifying and developing both high-quality talk and active listening in the classroom. It has a clear focus on the value and importance of talk where the classroom culture values it. Gaunt and Stott describe the purpose of talk and how this links to the sequence of learning. The book supports how to plan and teach talk with rich ideas, advice on relevant strategies for all subjects, regardless of your teaching experience. The Oracy Imperative builds a culture of classroom talk, both exploratory and presentational.

“High-quality talk in classrooms is easier to describe than put into action. This book sets out the meticulous detail, the what, the why and the how of securing great quality talk in the classrooms.” Mary Myatt

Why read it?

We must introduce one precious ingredient in the heart of each classroom. Talk. Dialogue is more important than ever, especially in the current circumstances. Our young people have missed out on opportunities for structured talk with adults in subject-specific domains. High-quality

talk and its twin – listening – underpin reading and writing. It is critical, therefore, that we teach speaking and listening explicitly. High-quality dialogue develops ambitious vocabulary and is the most effective vehicle for learning new words. This book focuses on embedding purposeful talk; giving teachers an awareness of how to do this, and the expertise and knowledge they need. Harnessing oracy means that students can be supported to express themselves and feel heard. It is more important than ever to create the right culture for students to talk and listen.

The EEF suggests that oracy intervention has positive impact on learning and reading comprehension. Good readers ask questions, predict endings and want to piece the puzzle together. As educators, we need an awareness of how this ‘oracy imperative’ can benefit our young people in the classroom. High-quality dialogue develops more sophisticated expression and communication in every medium.

Anecdotally at Trinity Academy Cathedral, in Drama, students who did not engage well during remote learning have lost their confidence answering questions articulately, with adequate volume and taking risks during performance. Our young people need to find their voice to

be able to express themselves, improve their well-being and ultimately harness subject-specific understanding to close the gaps.

There is a 19-month gap in language skills from lowest income families. (Communication trust 2017: talking about a generation). The impact of this most recent lockdown is yet to be recorded.

Main takeaways

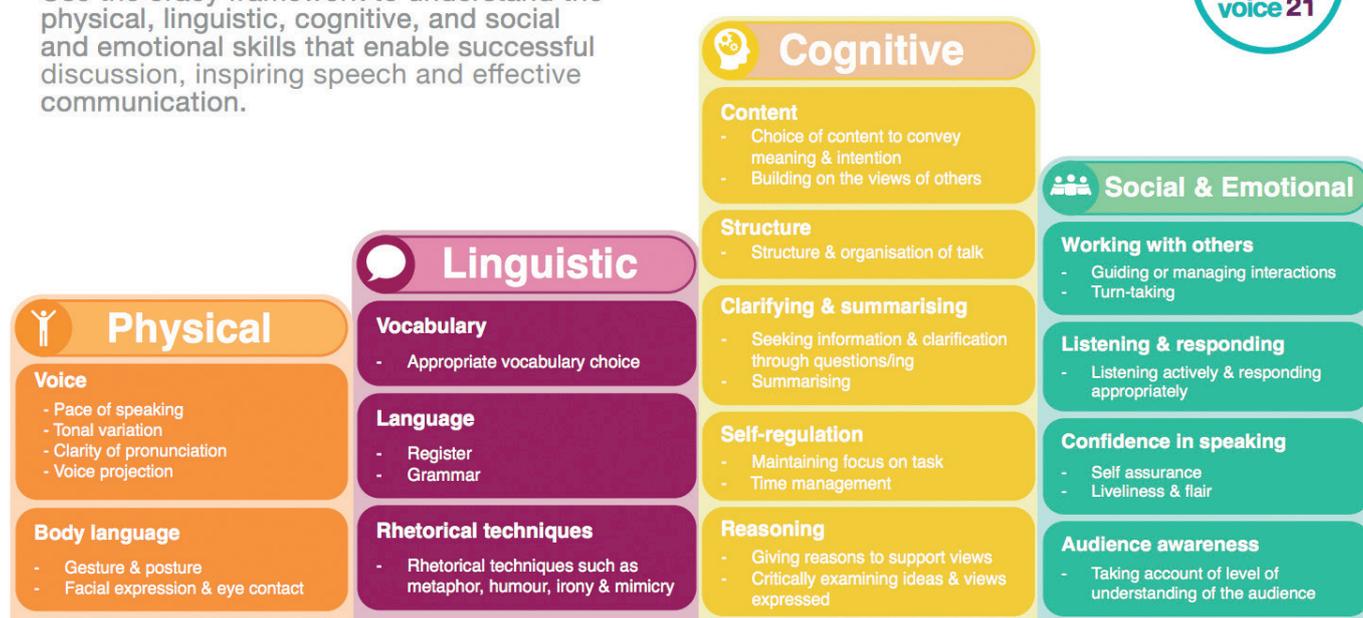
Knowing what makes good talk – simplicity is key!

- The book provides a clear framework to explain what constitutes good talk. The framework consists of four clear strands: physical, linguistic, cognitive, social and emotional.



The Oracy Framework

Use the oracy framework to understand the physical, linguistic, cognitive, and social and emotional skills that enable successful discussion, inspiring speech and effective communication.



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Developing purposeful talk and structuring oracy

- This considers purposeful talk in the classroom and how it links to sequential learning. Whether it be to temperature-check understanding, identify misconceptions, practise vocabulary or to evaluate and compare ideas with others. The following areas must be considered when planning for effective classroom talk: purpose, outcome and student motivation.
- The importance of scaffolding and supporting students to produce high-quality talk; through sentence stems, modelling and use of stellar examples just as we would for writing.



Developing talk's twin: listening!

- This section goes into detail about the importance and value of listening in the classroom. Gaunt and Stott explore how listening enables students to engage and learn from their peers, consider complex ideas and hear new vocabulary in various contexts to deepen understanding.

Listening Ladder

The Listening Ladder sets out the various listening skills and orders them in terms of complexity. It can be used to support students to reflect on their discussion and to set targets for which rung they have and want to reach.



Summarising the speaker's ideas
Asking questions that dig deeper
Asking questions to clarify understanding
Reacting and refocusing
Offering nods or short words of encouragement
Giving eye contact to the speaker
Being calm and still
Giving 100% of their focus to the person speaking

Practical application to the classroom

Improve the quality of talk and set specific ways students can interact with one another.



Discussion roles – to develop exploratory talk

- Strong contexts for exploratory talk are: solving a problem collaboratively; discussing an issue; explaining or interpreting a diagram and/or image with a group and engaging in role play. Therefore, this is applicable to any subject. There are six roles: instigator, builder, challenger, clarifier, prober and summariser. (See below image and descriptor.)

1. Instigator – starts discussion/opens a new topic
2. Builder – develops and adds ideas/elaborates
3. Challenger – disagrees/presents other argument
4. Clarifier – simplifies ideas to make them clearer
5. Prober – digs deeper and asks for justification of ideas
6. Summariser – identifies the main ideas from the discussion

Discussion Roles

Discussion roles help students to manage talk and encourage the development of certain speaking and listening skills.



Instigator 

Starts the discussion or opens up a new topic for discussion

Will say:
I would like to start by saying ...
I think we should consider ...
We haven't yet talked about ...
Let's also think about ...

Prober 

Digs deeper into the argument, asks for evidence or justification of ideas

Will say:
What do you think would be the effect of ...?
Why do you think ...?
Can you provide an example to support what you are saying?

Challenger 

Gives reasons to disagree or presents an alternative argument

Will say:
I disagree with you because ...
You mentioned X but what about ...
To challenge you X, I think ...
I understand your point of view, but have you thought about ...?

Clarifier 

Simplifies and makes things clearer by asking questions

Will say:
What do you mean when you say ...?
Can you explain a bit more about ...?
Does that mean ...?
Please can you clarify what you meant by ...?

Summariser 

Identifies the main ideas from the discussion. This might be during the discussion, to help move the conversation forward, or at the end of the discussion.

Will say:
Overall, the main points were ...
The main ideas raised today were ...
Our discussion focused on ...
The three main things we talked about were ...

Builder 

Develops, adds to or runs with an idea

Will say:
I agree, and would like to add...
Building on that idea, I think ...
Linking to what X said, I think...

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- Each of the discussion roles breaks down the cognitive strand of the oracy framework and sets out specific student interaction to develop ideas and develop higher-order thinking skills. When using this strategy, it is imperative the roles are introduced one or two at a time to prevent cognitive overload to move the learning forward.



Always true/never true/ sometimes true

- This strategy will enable staff to consider what makes purposeful and engaging dialogue. This is applicable to any subject.
- A series of statements are presented to students, and they must decide whether they are always true, never true or sometimes true. This is particularly useful for students to develop reasoning skills and encourages them to find examples to support their answers. It is particularly useful to temper-ature-check understanding and address misconceptions before going on to a new topic or scheme of learning.
- It could provide an interesting hook as an engaging starter that is relevant to students' lives and experiences to develop schema and enhance understanding.

Groupings – the power of the trio

Applicable to any subject to develop both discussion and listening.

- The power of a trio allows more opportunity to develop a more rounded discussion. The group is still small enough to ensure that every student has plenty of opportunity to speak up. This is powerful for the quieter child to listen, then contribute to discussion and also for new language learners to listen to their peers as language models.

Silent summariser (A, B and C)

Students A and B discuss a given topic or question. Student C must silently listen and summarise the main points of the discussion. Sentence stems must be given to scaffold conversation. This gives students the opportunity to practise the cognitive skill of summarising as well as listening.

Trio questioner (A, B and C)

- This strategy is very similar to the silent summariser, where Students A and B discuss a given topic, question, stimulus (painting/photo/poem for example), then student C can only respond by asking questions. Sentence stems must be given to scaffold conversation.

The above strategies are great for forcing more dominant characters in the classroom to be quiet and listen, allowing opportunity to practise the cognitive skill to summarise, clarify and to think of challenging, thought-provoking questions.



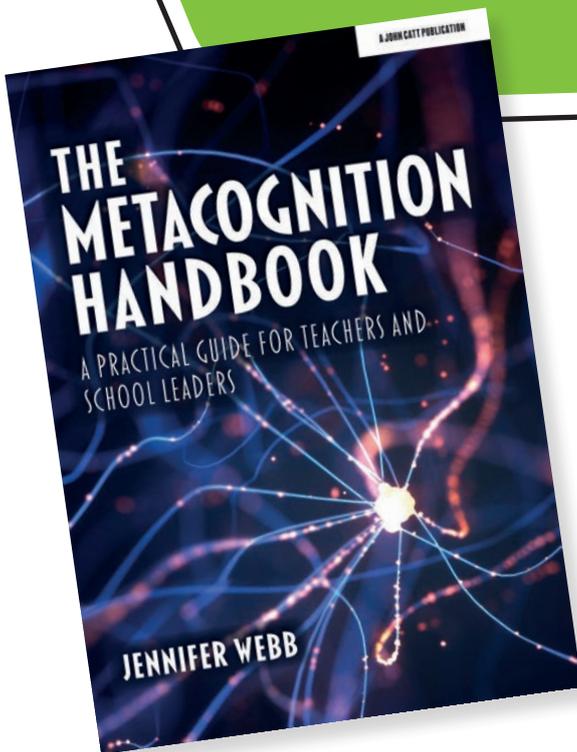


Extract from *The Metacognition Handbook* – Jennifer Webb

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happens, and they are able to actively and independently apply this understanding to help them learn in the most effective way, and to sustain that learning into the future.

As you can see, metacognition is a nebulous concept which covers a range of different skills and actions. I am going to divide metacognition into three separate strands, drawing partly from the EEF¹ and partly from the work of Tova Michalsky²:

Metacognitive knowledge: knowledge that a learner has about the task at hand, what they know about themselves as a learner and what learning strategies they know which will help them to complete the task.

Metacognitive regulation: the learner's ability to plan, monitor and evaluate their own learning whilst completing the task. This is about actively applying their metacognitive knowledge in real time.

Metacognitive motivation: the extent to which a learner wants to perform a task, related closely to their interest in the task and belief in their ability to succeed (self-efficacy).

What is metacognition?

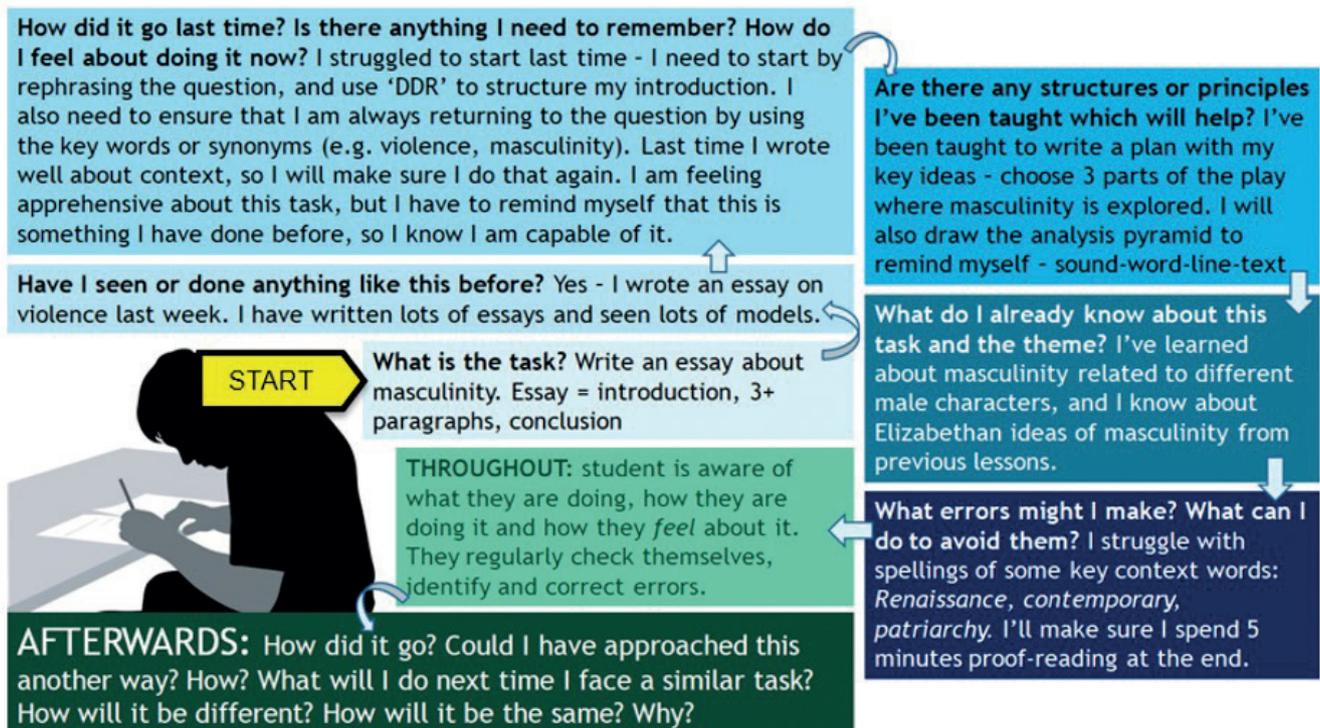
Metacognition is a set of behaviours which maximise the potential for, and efficacy of, learning. Different people have defined it in slightly different ways, but for the purposes of this book, I am working with this definition:

A metacognitive learner is one who has knowledge and control over cognitive skills and processes. They understand how learning

¹<https://educationendowmentfoundation.org.uk/tools/guidance-reports/metacognition-and-self-regulated-learning/>

²Integrating Skills and Wills Instruction in Self-Regulated Science Text Reading for Secondary Students, Tova Michalsky, International Journal of Science Education, 2013, vol 35, no. 11, 1846-1873

An example of how that might look is here:



Task: Completing an essay in timed conditions: How does Shakespeare present masculinity in the play?

This student is doing their work metacognitively. They are going through a series of internalised questions, e.g. "Have I seen or done anything like this before?"; and they are using these to identify for themselves what they should do next. They aren't putting their hand up to say: "Miss, I don't get it." They are only going to do that if they have exhausted all of their own metacognitive toolkit and still don't have an answer.

The student goes through all three areas of metacognition:

Knowledge: identifying what the task is asking them to do, recalling the things which they have been taught and deciding which of those things would be most useful to them now. They are reflecting on their own common errors and

pre-empting those with a clear strategy. They are remembering how they performed the last time so that they can continue their development, build on successes and address areas of weakness.

Regulation: they are aware of themselves throughout the task, they are also able to make corrections as they go and identify trends in their behaviour. Reflection following the task is a way of ensuring that they can put all of these powerful strategies in place again the next time, continuing that upward trajectory.

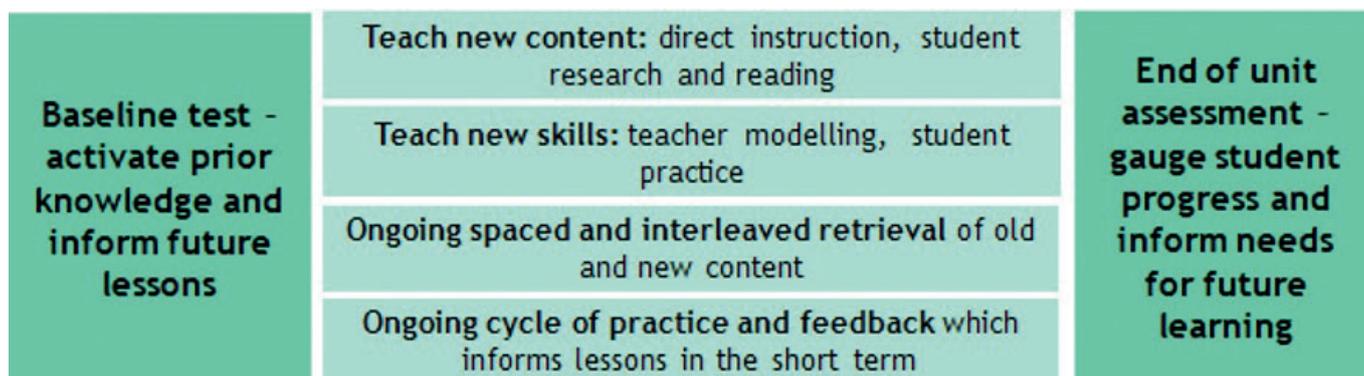
Motivation: considering how they feel about the task before, during and afterwards; using strategies to inspire or reassure themselves in order to push through. The student understands that it is natural to feel nervous or lack motivation about a piece of work, but by being aware of those feelings, they can help themselves to push through and be successful anyway.

DOING metacognition vs. BEHAVING metacognitively

As you can see from the example above, a metacognitive learner is highly skilled. This level of knowledge and independence, as with anything else we do in the classroom, takes time. This is not achieved by 'doing' metacognition activities in the

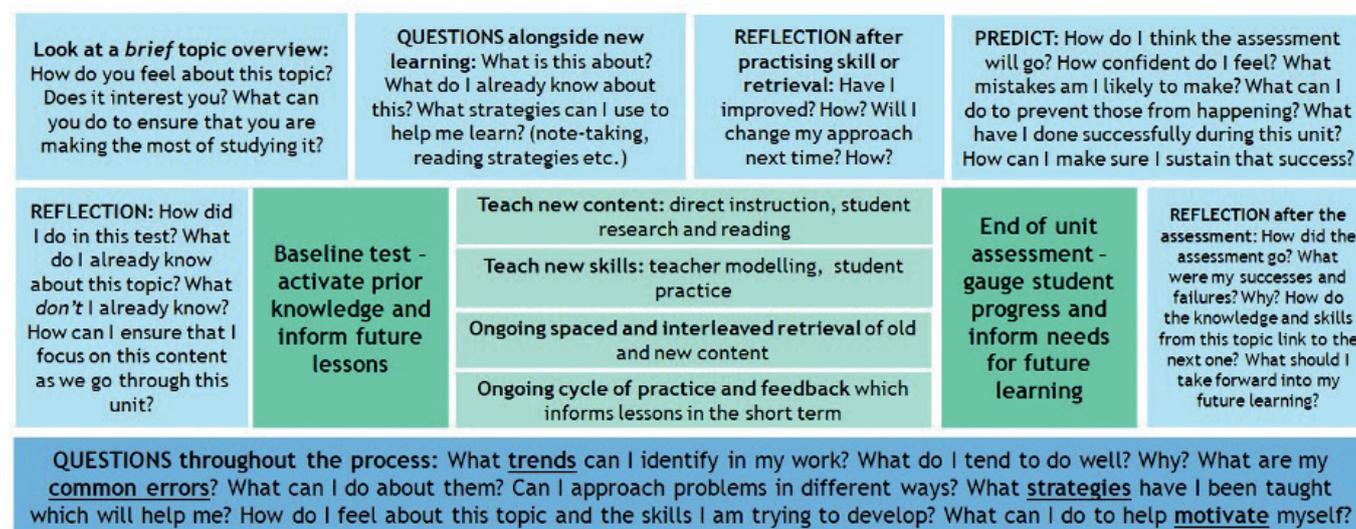
classroom. Giving students a reflective plenary every few weeks is not the same as teaching them to be metacognitive learners. Instead, we must see metacognition as a framework around everything else we do.

For example, if someone is teaching a unit of work, they might have roughly the following structure:



This follows many of the key pillars of sound teaching practice.

With a metacognitive frame, we can take that effective structure and optimise it:



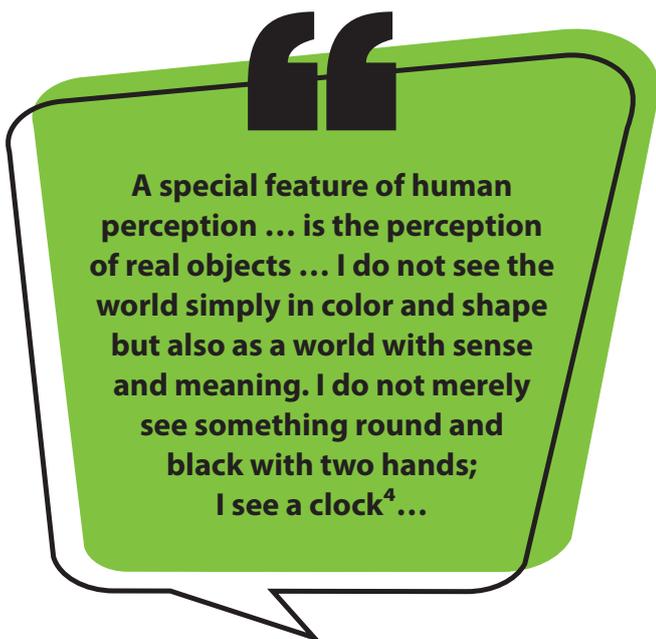
You will see that, while the content and key teaching strategies remain the same, metacognitive questions and reflection sit around those elements, ensuring that learners are actively aware of all that they do. I see this metacognitive framework as a guard against passivity: students can't float through their lessons expecting to learn things by simple exposure to a teacher if they are

regularly engaging in metacognitive questions which force them to identify their strengths, weaknesses, performance successes and failures, and motivation, whilst also strategically planning for future learning. Nothing is passive. Everything they do is deliberate and purposeful. There is no waste in the metacognitive classroom.

A teacher who uses metacognitive approaches as a framework for their teaching is able to train their students, over time, to behave metacognitively. By giving explicit, scaffolded support in the first instance, and gradually removing the stabilisers over time, we can achieve genuine independence.

Extract from Classroom Teaching chapter: Metacognitive talk

Lev Vygotsky³ viewed speech and social interaction as playing a fundamental role in the learning process. He posited that when humans learn, their linguistic abilities enable them to give meaning to the things which they perceive. The cognitive process is not simply about seeing and understanding something. It involves the use of language and culture as a framework through which we impose meaning on the world around us:



Vygotsky argued that learning is actively constructed by learners, not simply because they encounter a shape or colour or sound, but because they use language to create meaning. Critically, that use of language is a social experience, and therefore learning is co-created between people through talk.

³Vygotsky, Lev (1978). *Mind in Society*. London: Harvard University Press
⁴ibid

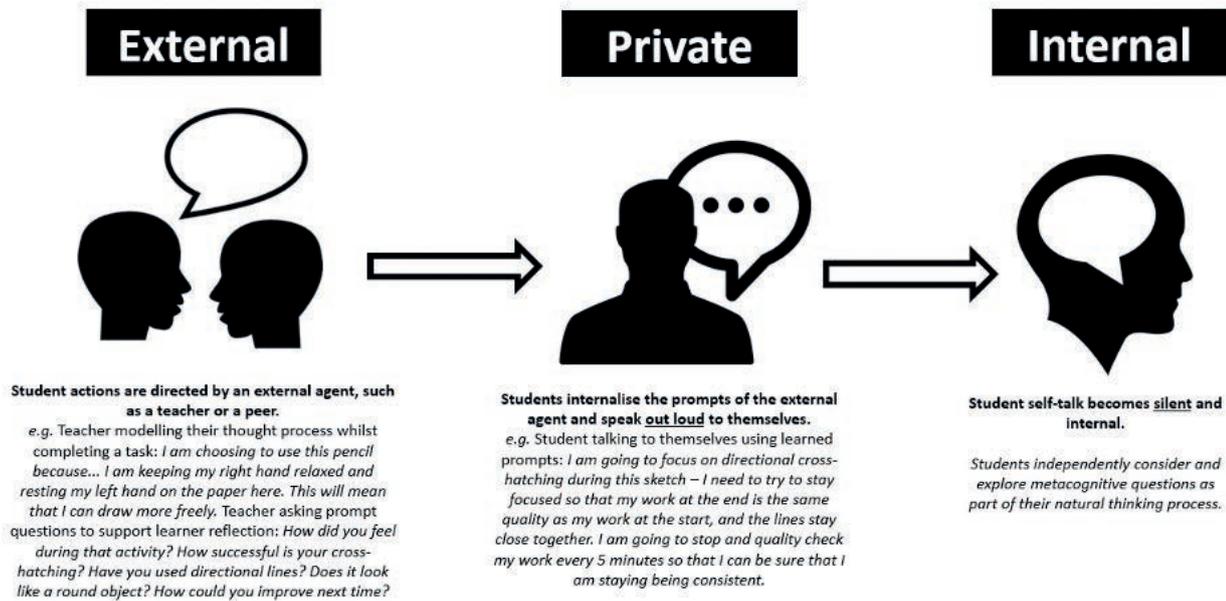
Put simply, Vygotsky argued that a critical part of the learning process is social interaction between a student and an external person (usually a teacher), and learners gradually move away from the need for that social guidance, and toward independence.

We can apply this to metacognition. According to Vygotsky's theory of verbal self-regulation, students move from external talk and guidance to individual self-talk, to internal self-talk. In other words, they go from a teacher talking them through something, to becoming completely independent. He said that:

"Every function in the child's cultural development appears twice: first, on the social level and, later on, on the individual level; first, between people (interpsychological) and then inside the child (intrapsychological). This applies equally to voluntary attention, to logical memory, and to the formation of concepts. All the higher functions originate as actual relationships between individuals."



Metacognitive self-talk: from guided to independent practice



In the classroom, we can promote this journey from guided to independent talk by doing the following things:

External

- Explicitly speaking out loud our thought process when we model tasks in front of students.
- Giving prompts to students to support them to develop their metacognitive knowledge, regulation and motivation during group discussion, or one-to-one conversations in the classroom.
- Using talking partners and getting students to prompt and question each other.
- Asking students to use metacognitive question prompts in a discussion with somebody at home as part of home learning.

Private

- Giving students written prompts and asking them to speak to themselves out loud before, during and after a piece of work. Depending on your class, this might be something you can do in a lesson where students just focus on their own self-talk, though this may not be appropriate in all situations. Students can use written prompts to talk out loud as part of home learning.

- Get students to model their own 'talk out loud' process for the rest of the class, e.g. rather than teacher modelling, get a student to show their work (under a visualiser or in some other way) and talk the class through how this was achieved. Once students are comfortable with this, you might move to the more challenging task of a student live modelling in front of the class, though this is advanced metacognitive work!
- As a homework task, ask students to record themselves reflecting on a piece of work or learning they have completed. You might give them four or five questions and ask them to record themselves talking for two minutes, expanding on the 'why' and 'how'.

Internal

At this point, students are able to apply metacognitive principles independently and are actively thinking through the kinds of questions and prompts which have previously been spoken to them and by them. When I have students who are this well trained, I like to include recall questions about their metacognitive knowledge as part of their normal retrieval practice. For

example, we might be doing a recall quiz with 20 questions. Most of the questions would be subject-specific content we had been covering, e.g. the Renaissance Period, WW1 poetry, grammar rules. But a couple of the questions would be things like:

- What is the best strategy you know for proof-reading? When was the last time you used it? Would you change it in any way?
- If I asked you to complete a timed written assessment on this topic now, how would you feel about it? Why? What could you do to motivate yourself?

Bodrova⁵ has explained the link between Vygotsky's theory and the development of students:

"For Vygotsky, self-regulation is not a single trait or even a combination of traits but rather a critical development signaling emergence of uniquely human set of competencies 'higher mental functions.' While not using the word 'self-regulation' to describe higher mental functions, Vygotsky described them though as deliberate, intentional, or volitional behaviors, as something that humans have control of. Acquiring higher mental functions allows children to make a critical transition from being 'slaves to the environment' to becoming 'masters of their own behavior.' This process requires children to master specific cultural tools – including language and other symbolic systems – which they can use to gain control over their physical, emotional, and cognitive functioning."

It is through the effective use of language in the classroom that we empower students to 'gain control' over the cognitive process.



⁵Developing self-regulation: the Vygotskian view, Bodrova, E., 2006, Academic Exchange Quarterly



The Secret of Literacy: Making the Implicit Explicit – David Didau

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What is it about?

Didau's aim within this book is to demystify the 'off-putting' and anxiety-inducing term 'literacy'. Promoting 'literacy' in schools makes it sound as though it's someone else's job. But literacy is language. Literacy is teaching and learning. Developing our students' abilities in reading, writing and oracy isn't an additional extra: it's our job.

What follows is an array of simple and straightforward strategies, aimed at helping teachers to break down their implicit subject knowledge to make it explicit and accessible for their students. Chapters include anecdotal evidence, models and research, with a specific focus on teaching sequences, planning, marking and feedback. There are also three chapters dedicated to reading strategies, writing and oracy.

This book is aimed at teachers of all subjects. After all, as Didau states: "If you are a teacher in English, then you're a teacher of English."

Some interesting statistics and tips

- We need to understand at least 90% of the vocabulary in a text before we can process it, let alone enjoy it. And enjoyment should be a key component! Where possible, expose students to material that will spark their curiosity.
- If students can't say it, then they certainly won't be able to write it. Encourage students to verbalise their ideas using thought stems that make use of subject-specific terminology. That way, they will be far more likely to utilise this vocabulary in their academic writing.
- Don't assume students know how to read long texts. Three basic skills we can explicitly teach are skimming, scanning and zooming.
- Skimming: the first sentence of a paragraph is often the topic sentence and will give students an idea of what the paragraph will be about. When skimming, help students to focus on the words that provide information.
- Scanning: teach students to identify key phrases from the question when completing comprehension tasks. Questions will usually be asked in order of appearance in the text, which



is something we implicitly know, but that some students may not realise.

- **Zooming:** ‘zooming’ in to the language allows you to examine small details about the text and focus on individual words or short phrases. Zooming out allows you to see the ‘big picture’ and discuss how the writers’ techniques help us to understand the intention.

Main takeaways

In language use, there is always a lot left unsaid and must be inferred. That means that communication depends on both writer and reader sharing a basis of unspoken knowledge. If students are to develop their understanding of texts, they have to be taught the background knowledge of whatever topic they are learning about. The word-rich are able to use what they know about language and the world to interact with what they are reading; this helps them to create meaning.

However, Didau argues that as word-rich teachers, we often take for granted what our students

know. The first stage in developing independence in our students is to provide explanations. But, how can we do this without boring our students to death with teacher talk? Didau proposes that our explanations should be clear, relevant and memorable. Specifically, teachers must spend time planning how they will convert complex and nuanced ideas into explanations that are both accessible and challenging for the students. Ideally, your language will be adapted to activate links between what they already know and what you are trying to teach. If I, as a teacher, am unclear, it’s unlikely the students will follow my explanation. This illustrates the importance of excellent subject knowledge. As Einstein said: “If you can’t explain it simply, you don’t understand it well enough.”

Didau also makes an explicit link between learning and growth mindset. He prefaces new topics by first of all emphasising how difficult it will be. By making it clear to students that mistakes and challenge are essential to the learning process, he hopes to illustrate that effort and hard work are integral if students want to grow.





Trinity Academy Grammar Think Pieces



Trinity Academy Grammar Think Pieces

In what can only be described as a year like no other, the Teaching and Learning team at Trinity Academy Grammar saw an opportunity to reflect on all the great work we had done so far as an academy on our journey to be the most transformational academy in England. We looked closely at the intent and implementation of many of our Teaching and Learning initiatives, as well as the impact of these to date. This invaluable opportunity afforded staff the time not only to reflect but also debate and re-engage with the educational research which sits behind these priorities.

Over the entire period, we produced in excess of 200 Think Pieces. The following is just a small selection of those we collated. They come from a variety of curriculum areas and a range of staff across all career stages. What they all have in common is that they clearly highlight the dedication and commitment of our staff to the students at Trinity Academy Grammar.

Happy reading!

TAG Teaching and Learning team





Language of the Lesson

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Intent:

In May 2019, an initiative called Language of the Lesson was introduced at Trinity Academy Grammar. This had a primary goal of having a selected word becoming a key piece of vocabulary being used throughout the lesson. The selected Language of the Lesson word has a definition and an example sentence, which uses the selected word, and this is shared with students as part of the 'Planner Copy Do' (PCD) entry into the classroom routine. Students are expected to copy the Language of the Lesson into their book along with its definition. All students are expected to repeat the Language of the Lesson three times following teacher modelling, and also practise its use in an example sentence. This initiative links very closely with Rosenshine's Principles of Instruction which requires teachers to introduce new knowledge in small steps and model how the new knowledge should be used. It is also linked to the research which highlights the devastating impact a vocabulary deficit has on a student's access to their learning and then on their adult lives (e.g. National Literacy Trust and Quigley, 2018).

It is our vision that this approach is used routinely within all subject areas in order to progress students' reading ages by broadening their understanding of Tier 2 vocabulary and developing their stamina and

confidence within the context of using subject-specific Tier 3 language. Ultimately, this aims to fulfil our academy intent that students leave us as strong and effective communicators.

Implementation:

As a newcomer to the school, I immediately bought in to the Language of the Lesson. When I implemented it into my first lesson I was presented with a whole-class, choral response which was immediate and cohesive. I was a brand-new teacher, it was midway through the year, and the clearly embedded routine allowed me to connect quickly with the whole class.

My role within the school is ASD Lead. It is no surprise, therefore, that I not only think of Language of the Lesson as an effective method for closing the vocabulary gap, but also as a method to support students with structure and routine; an element that is essential when teaching students with autism.

Language of the Lesson does not only encourage routine in the classroom, it also encourages students to build their oracy skills. This is a skill that is often overlooked in schools and a skill that children with

autism can often find overwhelming. The idea of saying it as a teacher, repeating it together as a class before a student is customarily selected to read either the word or the sentence, means that they are practising this skill within a safe space. Within lessons, it gives me the opportunity to purposefully select students who may find speaking in front of the class daunting. It is a good way to establish a positive start to a lesson and promote praise from the offset.

In addition to this, I have found that by returning to that student throughout the lesson to provide answers surrounding the Language of the Lesson, the student is kept engaged. This is because they are knowledgeable of the word and have already practised using it at the start of the lesson. I have found that praising students specifically for using the Language of the Lesson within their work or verbal answer improves their recall of it. This is also the case for subsequent lessons. Students can be praised for using a previous Language of the Lesson (e.g. from a previous topic).

I have not had a single lesson where a student has refused to participate in Language of the Lesson or question its importance. This goes to show how well this has been embedded as a whole-school culture.

Impact:

The subject of Science poses a whole 'minefield' of new vocabulary. A student can be expected to learn up to 15–20 words within a lesson, some of which can have multiple meanings in everyday life. This can prove as a massive barrier to success for our students. I have therefore found Language of the Lesson useful to identify pre-misconceptions and pronunciation of words, as well as help build the students' cultural capital, for example, I once taught a lesson about fertilisers and hardly any of the students had heard the term 'manure' before. This word was essential language that was needed to access the question.

What I have learnt since commencing my role, is that for the Language of the Lesson to be effective, the word needs to be emphasised by the teacher on multiple occasions. This is important throughout the entirety of the lesson. I think it is therefore imperative that the word 'gels' with the lesson. If the word is a separate entity, I feel that I return to it fewer times within the lesson and its impact is compromised. As a department, we have had CPD surrounding this. As a result, we are much more confident as a team in suggesting changes to the Language of the Lesson so that its relevance is as high as it can be. Since this, I feel that I am more confident in using the Language of the Lesson and this has increased its impact.

This leads me nicely on to the review of students' work within lessons. I have found in many lessons that the Language of the Lesson has provided a starting point for knowledge to 'stick to.' This is especially the case for LAP students. I have found that when they have independently used the Language of the Lesson in their work, I know that they are confident in using it and I can praise them for this. In turn, the student is encouraged to use it further.

As a SEND department, we strive to maintain high aspirations for our students. Language of the Lesson provides our students with a means to do this. Whilst questioning, I will often say phrases such as "think back to Language of the Lesson." This can often induce a 'lightbulb moment.' The student feels more independent as you have not given them the answer, rather, they have figured it out themselves. I have also found that it has allowed me to promote the culture of oracy to a high standard, for example, "just say that for me one more time but a bit slower this time." Students are accustomed to this culture and so the feedback comes from a place of positivity and importance rather than pedanticism.



TA deployment

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Intent:

With 23.7% of the Trinity Academy Grammar cohort classified as SEND, compared to the national figure of 15% (10% in academies), the impact of teaching and learning on our most vulnerable learners remains a significant priority. For this reason, a SEND review was carried out in September of this academic year to support us in identifying our key priorities. They were as follows:

- Some issues with Teaching Assistant (TA) deployment and the rationale behind the lessons/students were highlighted.
- Communication between staff and additional adults was inconsistent.
- Additional adults were not always supporting SEND learners to be independent and develop their autonomy.

Recent research from the EEF (2018) and The Institute of Education (2017) demonstrates that the above issues are not uncommon and, more significantly, states that the 'typical deployment' of TAs in schools has little impact on student progress.

As a result, in term 2, the T&L team and SENDCo gathered voice from our classroom support staff about their views on what their 'typical deployment' looked like. The main findings were:

- TAs felt they can perform their role better when they have at least an overview of what the lesson would look like ahead of it taking place.
- They also find an annotated seating plan incredibly useful as this provides clear direction for them.
- TAs are not always sure what their role is during 'quiet times,' e.g. assessments, whilst the teacher is leading whole-class modelling etc.
- Sometimes TAs feel that the teacher would be the better person to explain a concept to a student who is struggling. They feel that they do not have the necessary expertise to adequately break down key concepts.
- Sometimes TAs feel that teachers – whilst they are circulating – do not check the work of the SEND students that they are supporting.
- They feel in cover lessons that their role is not adequately considered in terms of supporting teaching and learning.

Following this voice, the T&L team in term 3, aided by the SENDCo and ASD Lead, carried out a series of T&L data collections in lessons where classroom support was present to ascertain a clearer picture in order that precise actions could be implemented.

We found the following:

- Routines and behaviour are so strong that very little direction or support is required by TAs in these areas.
- Conversely, very little obvious direction of TAs was seen in lessons. The caveat of this must be, however, that we obviously did not know the level of conversation that may have happened prior to this lesson or indeed all previous lessons.
- In almost half the lessons seen, the teacher was not collaboratively monitoring the SEND student(s) with the TA.
- In a third of lessons seen, the teacher did not directly involve the SEND student(s) in class discussion or group work.
- There was very little obvious redeployment of TAs to support students other than the SEND students.

As a result of this information and to fulfil our intent of ensuring high-quality teacher instruction being at the heart of teaching and learning, a series of non-negotiables were outlined with staff.

1. Make available at least the topic overview.
2. Ensure you have provided the most up-to-date annotated Mint Class.
3. When circulating the room target SEND students.
4. Involve SEND students in whole-class questioning/discussion.
5. When setting cover, specific instructions must be left for any support staff.

The above information was shared with all teaching staff and classroom support staff in CPD at the start of term 4, and curriculum areas began their discussions about what specific actions teams and individuals within those teams needed to take. Unfortunately, due to the lockdown that then took place, this work did not progress beyond this phase.

Implementation:

As part of the review, in the use of TAs in Geography lessons, I automatically thought of how I would improve the deployment of my TA in Year 10. My support staff member is supporting a subject which is not her own subject expertise. I thought about her helping students in the classroom, formulating responses to questions from content which would have been in taught in previous lessons, in which she wasn't present.

The reason why I thought about her subject expertise is due to the feedback on my own observed lessons. Feedback on my own lessons has always been outstanding; my seating plans were perfectly annotated (with terrible handwriting) and as a result the TA knew which students to work with. This freed me up to circulate the room, supporting all students and ask differentiated questions. However, I had always thought about the TA role from a teacher perspective and had not thought about it from their point of view in the classroom.

Sharing of short- and medium-term planning with the TA was the focus gleaned from the review shared in CPD. I was intending to share with the TA where the students are at the moment with their learning and where they are going next. This will have given the TA agency to increase their subject knowledge to support student progress; confidence to ask students questions that increase their retention of the content and also to boost the retrieval of past knowledge.

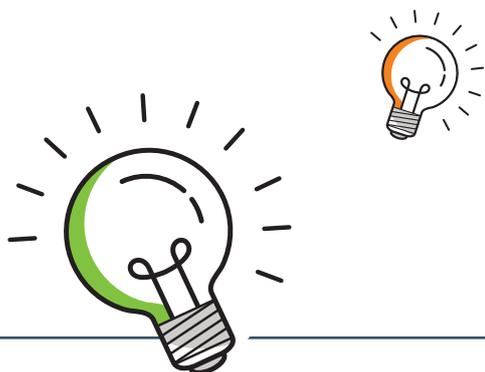
Sharing of this planning would have been given through email with a potential follow-up meeting before the lesson would have begun. This would have allowed any issues to be tackled before the lesson had started. As a result, both members of staff are available for student support.

Impact:

Impact on students of having two adults in the classroom with a knowledge of where the students have been before, where they are now and where they are going in their learning journey would have been tremendous. Support to the students would have been more completed as more questions could have been answered. It would help students who might have been too afraid to raise their hands in lessons. The freeing up of question time would have no doubt boosted student progress in lessons.

Another benefit of the TA knowing about the short- to medium-term plan is to help support students who might have missed school due to a number of reasons. This might have limited success due to the student and also type of support offered by a TA. If a student is hearing impaired, their TA's role is different than that of a TA who is supporting a student with an EHCP plan for instance.

Sharing strategies to support SEND students and TAs, as a curriculum area, will also increase the impact of TA support. Whilst sharing information, teachers who are less experienced might learn about how to improve their own practice of supporting SEND students. This will create a culture of sharing best pedagogical practice rather than just subject expertise.





Retrieval practice

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Intent:

The process of retrieval practice is nothing new in teaching. Rumblings of its existence can be traced back to the 19th Century, but the explicit use of it in educational settings, backed by developments in cognitive psychology and understanding how we learn, has become popular in recent years.

The goal of retrieval practice is to strengthen the retrieval strength of previously learned information: in other words, to make knowledge easier to 'bring to mind' for longer. The process of retrieval involves the transfer of knowledge from long-term memory into the working memory where it can be processed with stimulus information from the environment.

Repeated retrieval has been shown to promote greater retention of knowledge over time than merely re-reading information (Roediger and Karpicke, 2006) which is a common form of revision. An intention for retrieval practice at Trinity Academy Grammar is that students use testing as part of their regular revision, so they benefit from the testing effect. Teachers should also find as many pedagogical strategies as possible for use in the classroom which promote the use of students' internal resources rather than external supports.

Implementation:

Implementing retrieval practice requires students' external resources to be limited, so they are recalling learned information with little or no support, in order to strengthen their memory. At Trinity Academy Grammar, there are both retrieval activities embedded in lessons, as well as strategies used in conjunction with such activities to promote maximum retrieval. An example of a retrieval activity in Science would be the 'quick six' questions on the 'Planner Copy Do'slide (PCD). The six questions are an example of interleaving as they consist of two questions from each science and vary in how long ago they were initially learned by students. This gives students the opportunity to recall previously learned information. However, this is most effective when paired with strategies to limit students' environmental resources to promote unaided retrieval. These strategies include: instructing students to have their books closed, so they must think about the question and try to recall the answer internally; maintaining silence whilst students are completing the work so they cannot hear others' answers; getting students to turn over their mini-whiteboards (MWBs) once they have written an answer to reduce copying. These strategies can also accompany other forms of retrieval activities, such as a planner quiz or an exam question.

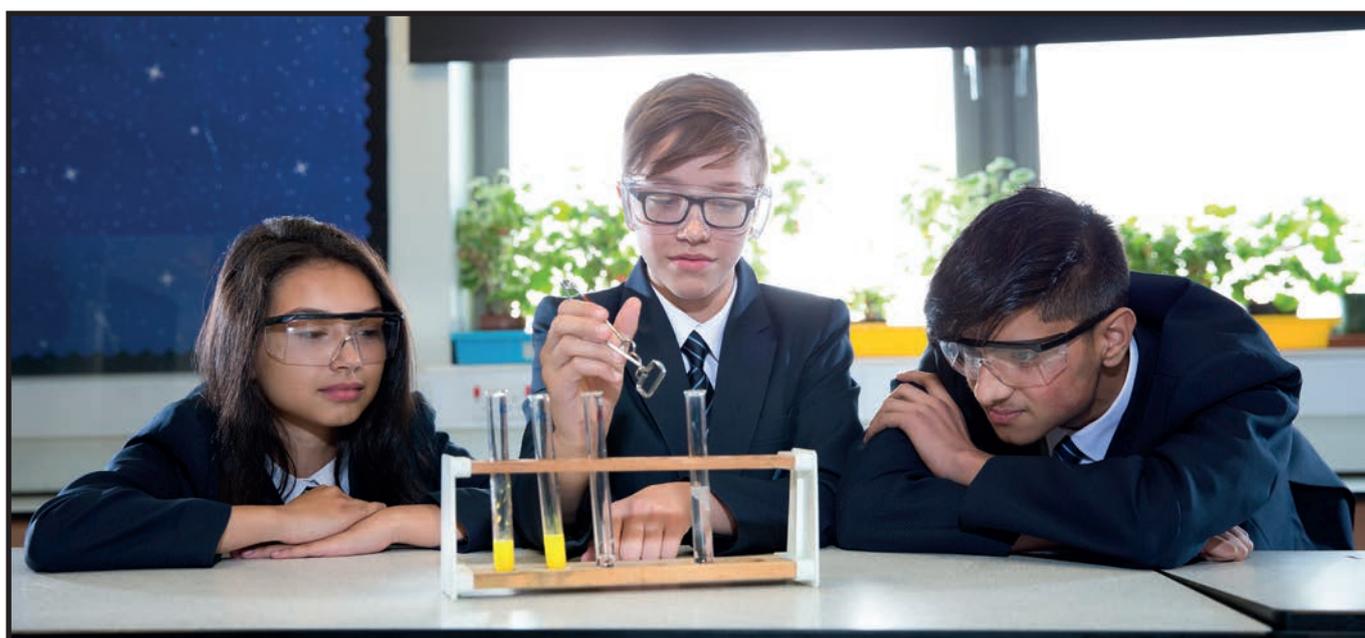
Student response to retrieval practice can be varied. At the start of the year, it was not uncommon for students to put their hand up and say they didn't know the answer to a question. This could happen immediately after students had read the question, prior to them thinking deeply or looking in their books. I have found that effective implementation of retrieval practice includes the questions being low stakes, with answers provided immediately afterwards. When this is an embedded routine, students know what to expect and I have found that it promotes students' confidence in their ability to just have a go, based on their prior knowledge. Student response is usually more positive for questions on content more recently covered and more negative for questions that were covered a longer time ago. Incorporating both types of questions is important to strike a balance between a healthy struggle and student confidence. Throughout the year, I have tried to reduce the number of students immediately asking for help by promoting the use of their book if they do not know the answer. However, going forward, I need to actively promote and embed with students the importance of trying to retrieve the information from their long-term memory before looking in

their books. Students need to build resilience when thinking about questions and not panic if they cannot answer it instantly.

Impact:

An impact of retrieval practice is that it aids the development of students' schema. This is of huge importance in Science as it is based on core knowledge which connects to different topics within Biology, Chemistry and Physics. At the start of each lesson, I will begin with a recap of core prior knowledge which will be essential to unlock the next piece of learning. By students strengthening their memory of this fundamental information, it is hopefully easier for them to build connections with the new content they are presented with, which impacts their understanding of concepts.

Evidencing the impact of retrieval practice is difficult as its benefits are internal to the student. For example, a student gaining full marks on an MWB quiz might indicate signs of successful retrieval, but this does not necessarily mean that retrieval has been more effective than a student who achieved half marks. This is due to the hypercorrection effect, which suggests that mistakes made in the learning process can be beneficial to the learning and their



encoding of information. This means that the next time students are presented with this information, it will potentially be easier to retrieve. I try to implement this through identifying questions from the 'quick six' that a large proportion of students have got wrong and include it in the next lesson's 'quick six' to see if students are then able to recall it. This is in the hope that students can see the benefit of retrieval themselves, which will help to build their resilience and confidence as learners. An issue with this is if students do not check what the correct answer was and merely cross their answer the moment they see it is not quite right. Due to the fast nature of the PCD slide I will often encourage students to 'quickly' mark their answers and, therefore, I am potentially discouraging students from reflecting on their incorrect answers, which is something I need to consider in the future.

An area in which I am developing my understanding of retrieval practice is using it within lessons as part of assessment for learning. Retrieval refers to recalling learned information from memory; merely recalling information that is held within the working memory would not result in retrieval. Therefore, the time between when students are presented with new information

and when they are asked to recall it, needs to be sufficient enough to allow for the information to no longer be in their working memory. This has brought into question some assessment for learning strategies that I have previously used in lessons. For example, showing students a labelled diagram of the digestive system and covering up different labels for students to recall on MWBs. In this instance, students are usually able to quickly recall the label, especially later on in the activity when they might guess which label is next. Previous strategies used to increase the challenge of retrieval include a transition which means that the diagram disappears and reappears with a different label covered. However, going forward, I would change the approach by not showing students a labelled diagram; instead, I would talk through the different parts on the diagram and then test them on this by providing a word bank of parts and asking them to complete one label at a time on MWBs. Student performance on this activity would be a better indication of whether the information had been committed to their long-term memory or not. However, subsequent spaced retrieval practice would be a more accurate representation of this and would also help students to strengthen their memory.





Rich Reading

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Intent:

In October 2019, a student survey indicated that 95% of Year 7 students felt they 'read in subjects other than English,' whilst only 42% of Year 8 responded positively to the same question. As a result, and to support our academy intent that students leave us as strong communicators and our curriculum remains ambitious, 'Curriculum Mappers' were tasked with embedding three opportunities per term for Year 8 students to experience 'rich reading.' This was actioned in English, Maths, Science, History, Geography, French, Art and Technology – a commitment which Alex Quigley comments is rare to find in secondary schools, even in 2020.

The purpose of curriculum reading was not only to narrow the gap between the Year 7 and Year 8 experience of reading beyond their English classroom, but to add a breadth and depth to our curriculum which would ignite excitement within our students. Beyond this, we wanted our students to recognise that reading is paramount for academic enjoyment and success in Science and Geography, as much as it is the more conventional literacy-focused subjects. After all, there is more to read in a Geography assessment than its History counterpart! Finally, curriculum reading was designed to allow the stories surrounding our subjects to come

to life for our students and tackle knowledge enrichment overtly and innovatively in order to share our hinterlands with the students. Wave I of this initiative has achieved the desired impact, with 82% of teaching staff agreeing that it has supported students in 'knowing and remembering more' – Wave II promises to be even bigger and better when it returns to our classrooms in September.

Implementation:

To begin with, rich reading in PE was not present in Wave I, but fundamentally, I am excited by the prospect of introducing the initiative in Wave II. I strongly believe that this pedagogy will bring about developments and advances among our student body that will help them thrive both in the wider school, in the subject of PE, and in later life and Post-16 academia.

Introducing rich reading to PE, as a team we have decided to include texts that will produce a greater sense of engagement and participation with the sports our students perform in. An example of this is our netball curriculum, where students will be reading inspirational extracts on role models in the game. This will be engaging for students because these role models have been carefully selected so they are relatable to our student demographic

and therefore we have deemed this reading to be beneficial for our student body. Reflecting on how rich reading complements current curriculum, the reading extract in rugby springs to mind. Students will be reading extracts from the book *Legacy* by James Kerr; by doing so they are gaining an insight into effective leadership, identity building and culture of success; themes that will profoundly impact on their engagement and attainment within the sports leadership composite.

Moreover, Kerr's book promotes a strong sense of responsibility and respect by doing a deep dive into New Zealand's All Blacks sporting culture. A particular extract that resonates strongly with these values is that the All Blacks, after a game, will tidy their own working/changing area rather than someone tidying it for them: "No one looks after the All Blacks, we look after ourselves." By delivering this extract to students we are reinforcing our core values, core values that when reinforced will be carried by Trinity Academy Grammar students in the community.

Embedding and approaching curriculum reading in PE is where the crux lies; as a team we hold participation time in high regard and reading can shorten this, nonetheless we are determined to make it work, as the initiative is so purposeful. Inclusion of TV screens to share reading extracts will enable the team to deliver the initiative to students in the changing room and this support is greatly appreciated as it allows high standards of participation in PE to be maintained. Albeit, by inspiring the students through these extracts, we hope that participation will be maximised both in core, extra-curricular and in the community.

As mentioned, rich reading will be a new initiative in PE and therefore the impact is perceived. Ultimately, the team and I can only see positive ramifications. Having discussed the reading material and the impact this could have on our students' subject-specific thinking, we deem

the gymnastics reading, Gabby Douglas's story, to be the one that can 'raise the bar'; a piece that can inspire our student body to look past sporting talent and see success as a consequence of endeavour. Ultimately, by sharing this story we can drive the effort and participation in our students during physical activity and sport, in turn promoting attainment.

As with everything in education, reflection is paramount. Rich reading, particularly the material delivered to students, will be under constant review by the team to ensure that the initiative is purposeful, and our hopes are being met, such as inspiration, participation and greater attainment in sport. What could be interesting, is if as a team we monitored the impact that rich reading has on participation through inspirational extracts and links to community sport clubs/teams. Detailed, this may simply be a student survey that compares participation in community sport pre- and post-rich reading – investigating if the material used did in fact deliver that inspiration and insight to participate. Real tangible evidence that can be reported to new members of staff, Ofsted or the wider community, showing that at Trinity Academy Grammar we make a difference.

Finally, I wholeheartedly believe that the initiative will be profound, and continue to develop the 'reading culture' established at Trinity Academy Grammar. If I may suggest, to continue to promote this 'reading culture' and an enjoyment of reading, then it may be beneficial to share what members of staff are reading at the present moment in the hope of inspiring and sharing our own love of reading. We could do this by simply having a laminated card on our classroom doors, where teachers can display what book they are reading by writing on the card. I know I speak on behalf of the PE and Health team when I say we are extremely looking forward to bringing the initiative into the curriculum in the next academic year.



PCD – Planner Copy Do

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Intent:

In November 2017, the 'Planner Copy Do' (PCD) slide was introduced at Trinity Academy Grammar. The routine was born out of a piece of work done by the T&L team at that time on wasted time, particularly at the start of lessons (inspired by Lemov's Teach Like a Champion). We found that an inordinate amount of time was being lost due to students getting settled at the start of lessons and completing basic tasks such as getting out resources and equipment, copying the date and title, and completing a starter task. The primary aim of the routine was to create a structured and consistent start to all lessons, no matter what subject, to enable lessons to start quickly and efficiently.

PCD also links to our core value of responsibility as students clearly understand what is expected of them, including the high expectations of presentation and literacy, and they can carry this out independently with limited communication required.

As time progressed, the routine evolved with the pedagogical nuances of it being equally as significant as those related to time efficiency. Language of the Lesson contributing to our intent to create strong and effective communicators

through vocabulary development and the Do It Now task supporting the development of students' long-term memory, helping them to know more and remember more, have now become integral elements of this routine.

Implementation:

As a Trainee Teacher, having a calm and purposeful start to lessons has been a key focus of mine since the beginning of the year. I have focused in particular on ensuring that every class makes a prompt start and that the Do It Now task is as effective as possible for enhancing students' long-term learning.

When it comes to setting a Do It Now task for each class, I now provide students with simple recall questions to complete on their mini whiteboards. In previous terms, I gave each class a different style of Do It Now task every lesson, such as vocabulary tests and gap-fill worksheets. However, I found that students struggled to complete the tasks within the first seven minutes of the lesson and they often needed more explicit instruction on what they were expected to do. Every class is now given a set of six quick questions, which focus on recalling information

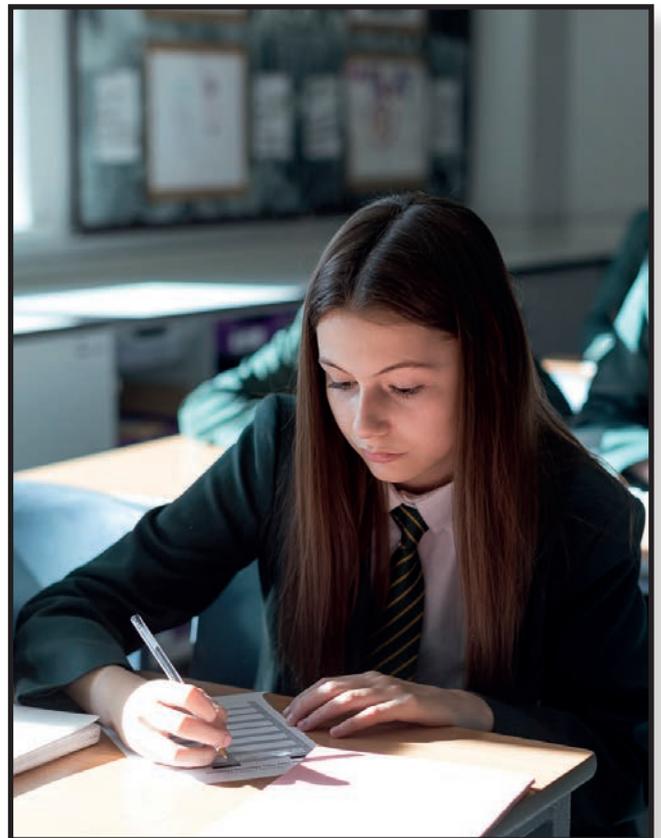
from the previous couple of lessons. For each question, students are usually asked to recall a previous Language of the Lesson, spot an error in a French phrase or translate a phrase into French or English. Once this has been completed, the students mark their own answers and display their scores on their whiteboards.

Impact:

Students clearly know exactly what is expected of them in the PCD routine and rarely need to be reminded of what they should do at the beginning of a lesson. This is likely to be because the routine is so strongly embedded across the school and students begin every lesson in the same way. As a Trainee Teacher, I found the PCD routine incredibly helpful for establishing high expectations for the start of lessons and for ensuring that each class is on task from the moment they enter the classroom. I was pleasantly surprised at the beginning of the year with the high number of Year 8, 9 and 10 students who completed the PCD routine with little prompting, having obviously remembered the expectations from the previous school year. For my Year 7 classes who were less familiar with the PCD routine, and took longer to settle, I found that it was easy to embed by using praise and achievement points to make an example of those students who were getting it right. It may be that increased teacher-student interaction would enhance this routine for all classes, given that the basic expectations have been so well embedded across the academy.

Not only does the PCD routine make it possible to have a swift and purposeful start to every lesson, but it provides a clear opportunity for low stakes recall and for students to reflect on their progress in the Do It Now task. Having used various formats of Do It Now tasks in my lessons, I've found that

students respond very positively to a 'quick six' format. I now adopt this style of task for every PCD slide, as it is accessible for all students and rarely requires further instruction. This style of task also makes it easy to spot misconceptions quickly, as students can mark their answers easily and display their scores on their whiteboards. By reviewing students' progress in this way, and at this point in the lesson, it is possible to address key misconceptions which may have prevented progress later in the lesson. Going forward, I feel it will be beneficial to incorporate a wider range of questions into the 'quick six' task, by interleaving phrases and vocabulary from the topics studied in previous terms and years. This will be particularly important in French, as it will help students across all years to recall common vocabulary such as greetings, numbers, days and months, which students can easily forget after Year 7.





Marking and feedback

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Intent:

In September 2017 a new Marking and Feedback policy was launched across Trinity MAT. The aim of the new policy was to ensure that students received frequent, timely, reflective and effective feedback on written work. This could be achieved in a variety of ways, including sample marking, zonal marking, live model marking and marking student requests. The new policy has made the process of feeding back on written work much more efficient for staff and would consequently have a positive impact on workload.

At Trinity Academy Grammar the feeding back process has been under constant review, and sample marking, as the method adopted by most staff, has evolved as a concept. One of the key intents within the feedback process is to enable students to revisit misconceptions and have the teacher unpick these. Re-teaching the concept and providing opportunities to practise is more likely to improve long-term learning than simply amending an existing piece of work.

The sample marking feedback sheet also contains a section for students to self-assess their presentation in their books, encouraging them to be caring and respectful of their work, and responsible for keeping their book in good order.

Implementation:

The use of green feedback sheets has been pertinent to the development of marking within the English department.

A typical feedback lesson generally takes an hour. Whilst some may regard this as an unnecessary use of time, arguably there is value to spending time to address misconceptions. When correct, students' prior knowledge can be used as a building block for acquiring new knowledge. When incorrect, prior knowledge interferes with a student's ability to process new concepts. Within an hour, misconceptions are broken down into manageable chunks and scaffolded at each point. The resulting chunks are easier to commit to long-term memory than a longer string of information, ultimately facilitating comprehension and information retrieval. Rather than simply giving a student a green feedback sheet and emphasising that it needs to be completed, breaking the learning down into chunks and using the lesson to scaffold, students are ultimately led through 'quick win' tasks that support independent practice in the 'big task.' What must be emphasised, however, is that even in independent practice, scaffolding is available to students to support to ensure that confusion does not arise.

Within the department, while the general consensus is that the feedback lesson should take an hour and use scaffolding to support, there are different approaches to the delivery of the lesson. Some like to use the feedback sheet as secondary to the lesson itself; it is a sheet used to facilitate the lesson, but the misconceptions are addressed through a visualiser or through tasks that students enjoy. Contrastingly, some prefer to delve in and out of the feedback sheet throughout the lesson, while others teach the lesson that addresses the misconceptions and students complete the green feedback sheet at the end. Whilst some approaches may be preferable to others, the lesson allows students to process what they have learned to gain a deeper understanding of what it is they are doing and why it is important that they understand it, to support future learning. The best practice, however, tends to be highlighted when only one misconception is addressed at a time; it is addressed in depth, rather than in little depth and to little effect. Rather than the green feedback sheet acting as a tick-box activity, it becomes an opportunity to strip the learning back to the core components which can then be built upon throughout the lesson. This then becomes an opportunity which can be exploited to improve knowledge, through challenge tasks and independent practice.

Impact:

As a department, which is an accumulation of specialists and non-specialists, it has been interesting to unpick people's thoughts on the agreed approach to feedback lessons. Non-specialists have expressed that they can really see the value in taking a lesson to break misconceptions down. This is likely to be the case because, when things are broken down, you can explicitly see at which stage the misconceptions arise. Spending time to strip the material back and get to the root of the misconception not only opens discussion and facilitates an environment

where students can learn from their peers, but also allows them to spend time mastering the area that needs to be addressed. To develop this further as a department, we feel that more time needs to be dedicated to feedback lessons within planning, to ensure that there is a balance between the delivery of content and addressing misconceptions.

Another focus of discussion was student responses to feedback lessons, and, from this, my mind began to drift toward what it is that I want for and from my students.

Unless a student understands the importance of their learning and addressing misconceptions, future learning is potentially hindered by student behaviour and attitudes. Whilst data seems to suggest that students feel that green feedback sheets have supported their learning, this does not stop the echo of grumbles when the sheets are handed out. The introduction of the 'Learning Journey' in English is a means to address this. There have been times when I have been met with questions such as "Why are we looking at similes again?" or "Miss, why are we going over this again?" Whilst the obvious answer to those questions is that it's because misconceptions have arisen, in English our curriculum is centred upon building an insightful understanding of core knowledge. Green feedback sheets enable us to address key misconceptions in the building blocks of learning, but to ensure further clarity, we revisit composites over the Phase to develop student knowledge. As a department, we are also implementing a system which makes the learning journey visual not only in the classroom but also in students' books. This will hopefully make the implicit, explicit and support in the delivery of addressing misconceptions as students make links between prior and new knowledge. This, I feel, will facilitate the delivery of feedback lessons further. It is one thing to address a misconception, but I think it is important that students understand why they are addressing them. The feedback lesson then becomes an opportunity for reflection,

understanding and development. As such, I want my students to be able to reflect on previous learning and then use this reflection to support future learning because I feel that in the past this hasn't been the case, which is probably because time wasn't being spent unpicking misconceptions productively.

Moving forward, whilst emphasis tends to be on misconceptions as they are incredibly important to address, it is also important that strengths are celebrated too. Strengths are typically shared at the start of the lesson. When we feel more positive emotions than negative ones, difficult situations are easier to handle. Students in 10VP typically lack confidence in their ability. To immediately start addressing misconceptions without celebrating successes would detrimentally impact their confidence and subsequently their attitude to tackling misconceptions in the lesson. To ensure that students do not become easily

deflated, I have found that making links between their strengths and weaknesses has developed their attitude toward tackling misconceptions. For example, if students strongly understand what a simile is but struggle to grasp what the 'effect' of the simile is, I will refer back to previous learning where they may have perhaps understood what a 'connotation' is. Going back to previous feedback sheets and drawing upon strengths and weaknesses, and looking at how we tackled those misconceptions, allowed them to reflect on their learning and realise that in some instances it is a case of mind over matter. Whilst the benefit of re-teaching the concept and providing opportunities to practise is clear, I also think there is a place for reflection within that process because I have seen those magical lightbulb moments when students are able to make connections between previous and current material simply because they have had the opportunity to reflect.





Interactive reading

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Intent:

In January 2020, the concept of Interactive Reading (IR) was introduced at Trinity Academy Grammar. The initiative is based on Doug Lemov's theory of the same name, where the primary aim is to support students in their reading of complex tasks and ensure rich classroom-based discussion of the key ideas from within the reading – this derives from the marking up that students do. It is our vision that this approach is used routinely within all subject areas, in order to progress students' reading ages, and develop their stamina and confidence within the context of reading. Ultimately, this aims to fulfil our academy intent that students leave us as strong and effective communicators; reading is a significant part of this.

Implementation:

I would certainly echo sentiments expressed in CPD regarding students' inherent knowledge and passion for IR when trialling this with 8R2. There was such fervour and enthusiasm when I first mentioned using it as a means of marking up the text I had chosen. The 'buzz' certainly contributed to increased student engagement and thus a subsequent lack of behavioural issues, perhaps as students felt comfortable with the consistency of such an approach across the school.

I was particularly interested to see how I could apply IR to a poem full of rich full of imagery and metaphor (Simon Armitage's fantastic *Out of the Blue*) so as to ascertain how such an approach could be used as a scaffold to help students explore these complex entities. I thus resolved to use IR as the first step of scaffolding to help students secure an understanding of the poem's basic 'storyline.' I think far too often – and I include myself in this – as English practitioners we expect students to understand the basic premise of a poem as a given. IR, in this instance, allowed me to take a step back and provide students with the ability to secure baseline knowledge that they could subsequently build on to think about inference and metaphor in part of a wider sequence of learning.

I ensured that my questions were worded carefully to aid students' understanding of the poem's narrative as well as completing a marked-up copy of the poem in relation to the questions posed. Having a marked-up copy proved to be invaluable as it meant I could do AfL in action by examining students' text marking. However, it also allowed me to explore students' cognitive thought processing through questioning when their marking up didn't match my own. As well as modelling expectations and completing the

first question together, I thought it was of further importance to display best practice from students who had finished (and were subsequently completing challenge tasks) so as to celebrate good interacting reading habits to contribute to the culture of IR.

Impact:

In this instance, I was pleased to see how students had more confidence discussing the metaphorical language employed by the writer because of their secure understanding of the underlying narrative of the poem. It's therefore apparent to me that IR exists predominantly at the start of a sequence of learning to help students achieve something deeper as the sequence progresses. I did, at first, wonder whether inference-based questions that I would usually integrate later in the sequence of learning, should be integrated within IR. However, such an approach would be incredibly difficult as outlined by Willingham here: http://www.danielwillingham.com/uploads/5/0/0/7/5007325/willingham&lovette_2014_can_reading_comprehension_be_taught_.pdf

I would stress the importance of critiquing such a strategy (as I would with anything I practise!) so as to avoid creating a 'reflexive loop' (Argyris, 1990) and the entrenchment of potentially flawed

practices. IR is obviously not the single remedy to combat student reading comprehension. This whole-school approach should be used in conjunction with existing strategies (Accelerated Reader) and yet-to-be-developed strategies in order to solve the issue. Furthermore, IR could be viewed as potentially restrictive and formulaic if used as the only method of reading in English.

That said, IR clearly has real merit within a sequence of learning to help make large volumes of reading manageable and to consolidate basic understanding. The importance of a whole-school approach should also not be understated as we aim to collectively improve the reading ability of our students at Trinity Academy Grammar.

Our next steps as a department are to think about how we might fade the scaffolding approach of IR over the course of an academic year so students progress from a novice who has reliance on a teacher's questions, to becoming an expert able to independently mark up a text without teacher intervention – something key for our Year 11s when they come to sit their GCSEs. I certainly think something like this would be a beneficial way of adapting IR over the course of Phase Two to develop students' independence https://www.youtube.com/watch?time_continue=6&v=u-bl-8PvIa4U&feature=emb_logo.





Core values

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Intent:

As the school was brought into the Trinity Multi-Academy Trust, the core values were launched. Our core values are so important to us that we spend time ensuring that our students fully understand them; this includes a significant proportion of the Year 7 bootcamp day for students in September. A key reason why these four words – Empathy, Honesty, Respect and Responsibility – were chosen is because they are core Christian values which are of paramount importance to the Trust as a whole. With Christianity also being the recognised religion of Britain, they serve as a fantastic link to British values and ensure these are at the forefront of all we do, ultimately helping our students to become well-rounded British citizens ready for life beyond Trinity Academy Grammar. Our ambition to be a values-driven academy is met through our academic curriculum, wrap-around pastoral care and co-curricular offer.

Implementation:

The core values of Trinity Academy Grammar encapsulate everything we do as an academy and are the driving force behind our daily practice. The plethora of opportunities and contexts in which students are exposed to the values only

strengthens their purpose. There is rarely a day in which I do not encounter an element of the values – whether this is implicit or explicit.

What I find most interesting is how, dependent on the subject, the values exhibit themselves in various ways. Within Creative Arts, students often find themselves participating in more practical activities, therefore there can be a greater opportunity to see the values in action. There is less time spent behind a desk, and more time interacting with both the teacher and their peers.

Take Drama, for example. Students begin the lesson by arriving with their equipment ready, demonstrating responsibility, as is done in each lesson throughout the academy – a testament to the rigorous routines that we have embedded into our culture. However, with Drama being rather a collaborative subject, there is an increased interaction between students: these interactions offer a wealth of opportunity for students to explore and showcase these values.

When students are working in groups, rehearsing a script or devising a scene, they must assume a sense of responsibility in order to delegate roles and 'responsibilities' within their group. Students must also demonstrate their ability to be

empathetic. In one lesson, students had worked in groups to devise a scene on a stimulus that they were given – not all members of the group were confident to begin with, and some were generally shy characters compared with other members of the class. The students in the group demonstrated empathy by working together to ensure that everybody would feel confident/comfortable enough to share their work with the class.

Impact:

I'm sure that we'd all agree that, as an academy, each core value is of equal importance. However, I believe that some can be more difficult for students to embrace, and I was reminded of this as leader of a group of students within the Shakespeare Schools Project. Through participation in the project, the students prepared a performance to be showcased in a professional theatre, alongside several other schools. Shortly before they were due to perform, a student expressed that they were feeling incredibly nervous; rather than keeping that to themselves, they were open and honest, and as a result, could benefit from my words of encouragement and enjoy the performance that they had worked so hard for.

After watching a performance of King Lear by primary school students who were hearing-impaired, I turned around to see 16 pairs of 'silent jazz hands' waving in the air, with tears in their eyes, as way of applause.

It wasn't until after our performance that I truly saw the reach that our core values have, and they really are the driving force toward making our students become well-rounded individuals.





Tracking

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Classroom context:

Intent:

In September 2018, the concept of tracking was introduced at Trinity Academy Grammar. The routine is based on Doug Lemov's theory of the same name, where the primary aim is to ensure that we create attentive and active listeners. Tracking also supports our core values, especially that of respect, and supports the research which highlights that almost half of a student's day is spent listening and 85% of their knowledge is acquired through listening. In addition to this, tracking also creates a clear routine for teaching staff for their questioning. It creates a clear questioning order centred on cold calling, which is understood by all, as well as providing the thinking time needed for students to consider and rehearse their responses. It also shines a spotlight on the clarity and audibility of students' responses which, in turn, supports student oracy. We are teaching our students what it is to listen. Ultimately, tracking aims to contribute to our academy intent that students leave us as strong and effective communicators.

Implementation:

The launch of tracking: my Year 7 History class. I was keen for tracking to be a success in my classroom, so before implementing tracking, I thought carefully about what question to pose to begin the routine. Many of my history classes are SEND and LAP heavy, so the question would need to be accessible and have the potential to be extended easily to stretch and challenge too. Before I could launch into using tracking for AFL in the classroom it became apparent tracking would support BFL too. 3...2...1...track me was magical and still is! To have 30 pairs of eyes meet yours in an instant was surprising. I believe many primary schools use similar tactics to gain the attention of their students, so many seemed used to this aspect already. The question was posed, followed by the five-second wait; this feels such a long time, especially as hands begin to shoot up all over the room, but wait we must! I then deliberately selected a student who had not had his hand in the air waving at me, 3...2...1... track Charlie. Charlie gave a correct response, but it lacked depth. I asked for some development, but Charlie was unable to build any further. I thanked him for his effort. A question aimed at developing Charlie's response further was posed to the

class, another five seconds of awkward silence. I was aware that the development question was quite tricky as it asked for two concepts to be linked together, the monarchy and the Church. This time I took hands up and selected another student who was able to develop Charlie's point and explain the link. Both boys were awarded achievement points and the lesson moved on. From a History point of view, tracking seemed to help ensure students were much more focused on the responses of their peers and the opinions shared in discussions soon began to find their way into the extended writing of the students.

Not all classes were as positive as my lovely Year 7 class. In other classes there was, at first, a general reluctance from the majority of the students I taught. Many of them laboured in turning around to look at their peers when they were speaking; this reluctance gradually faded as the students were cajoled and the few remaining stubborn ones were offered Cs for their efforts. The students began to get the hang of the tracking and so did I.

As SENDCo, however, it was soon clear that one group of students who would take a little longer to settle into the tracking system were our SEND students and students who suffer with anxiety. Many of our students with autism also found the tracking system a little overwhelming at first; despite having 'unofficially' tracked their peers for years, it seemed the formality of tracking presented something unfamiliar. The SEND team fielded phone calls from parents and external agencies who felt their child struggled with tracking and that it was 'unfair' for children with additional needs. Despite having initial concerns, I came to view tracking as an essential life skill for all students. I reflected on the SEND Code of Practice 2015; the guidance for secondary schools is very much focused on supporting students to be as independent as possible and to ensure they are equipped with the skills necessary for future success. I came to view tracking as part of the essential provision for our students to help unlock success for the future, but it would take some time to persuade a small minority of cautious parents and students.

Following open discussions with students, parents and staff, many reasonable adjustments were made to accommodate all students in the system of tracking. The tweaks to the tracking system included dropping the word 'track' for some of our learners; this instantly eased their anxiety and their peers continued to track them as any other student. As the months progressed and tracking became embedded in our school routine, we found fewer and fewer students were struggling with the system, and the SEND team received fewer and fewer concerns from parents. Our students with additional needs are flourishing in part due to the routine of tracking.

Impact:



I believe tracking has helped our students improve three main skills in body language, oracy and listening. Firstly, many of our students with additional needs struggle to make eye contact and tracking provides a compromise – they are looking toward the speaker. This routine has provided an essential basis for future life, be it socialising with friends or securing a job at interview – humans are a naturally communicative species and we are constantly looking for connection, usually subconsciously through body language. Students who struggle with making eye contact will subconsciously have their body language interpreted by the people around them. Secondly, as tracking developed it moved to present opportunities to focus on oracy, another key life skill many of our students struggle with, and a key focus of many of the speech and language outcomes on the EHCPs of our students. Tracking presented another key opportunity for our learners to improve their communication skills. The focus on oracy tied in well with the literacy push in school to upscale the vocabulary our students use; the process of tracking put focus on responses being well-thought-out as everyone in the classroom is listening, many students worked hard to ensure their responses were clear and where possible showed off their

understanding of the new vocabulary they had taken on board. Thirdly, tracking has helped develop the active listening skills of our students. Like communication skills, active listening skills feature on many of the EHCP outcomes for our students. Listening well is again an essential life skill and important for independence in the future. Tracking has also helped with inclusivity for our hearing-impaired students who supplement their BSL with lip reading; by the whole class tracking the speaker this has helped our students gain better access to the lip patterns of their peers, in turn increasing their own independence. To summarise, I feel tracking is helping our students to build the bridges in their social skills and helping our students work toward an independent future.

In January 2020, at our SEND coffee morning, one parent raised tracking as a concern for her child. Before our team could address this concern, another parent (who has previously questioned

tracking) in the room stepped in to defend the tracking system. She explained she felt tracking has helped her son who struggles with eye contact, he now is much more likely to look toward someone who is speaking than before. Another parent agreed and echoed our sentiments of tracking being a life skill that will help them socially with friends and peers in the future.

It is a pleasure to see how far the journey of tracking has come at Trinity Academy Grammar. I would advise any teacher new to tracking to go with it. There is never a one-size-fits-all solution to a whole-school routine and you must, where necessary, use your professional judgement to make reasonable adjustments. Finally, communicate with students, keep an open dialogue and encourage them to share their concerns about tracking with you so you can accommodate them and support them over time to become comfortable with the tracking system, as ultimately it is a life skill.





Dual coding – what you need to know

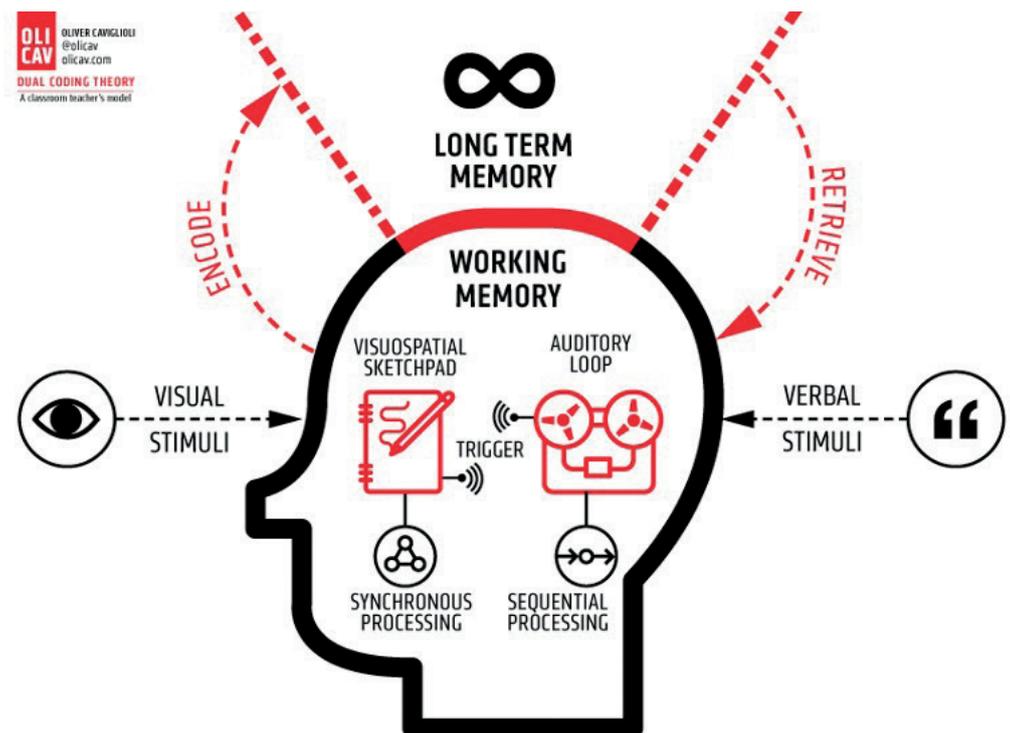
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What is it?

Dual coding is learning using different sensory pathways to transfer information into the working memory. We then encode the information into our long-term memory and the more ways in which we learn, the more durable our memory will be.

For example, if I asked you to share all you know about onions you would be relying on a range of sensory information: the sight, the smell, the taste, the feel, all of which are linked to your onion schema in your long-term memory. You may even trigger memories of seeing and hearing a cantankerous ogre conversing with a talking donkey about how the layers of an onion are analogous to the complexities of ogre-kind... All these different inputs lead to a deep and durable understanding of the humble onion.



In most classrooms we deal with verbal and visual information the majority of the time, so those are the inputs we tend to focus on. @olicav's wonderful infographic illustrates superbly what we, as teachers, need to know.

However, all is not equal in the world of dual coding. Visual information is, if well-constructed, easier to process than verbal information such as text, and therefore carries a lower cognitive load. We can absorb several aspects of an image at the same time (synchronously), whereas verbal

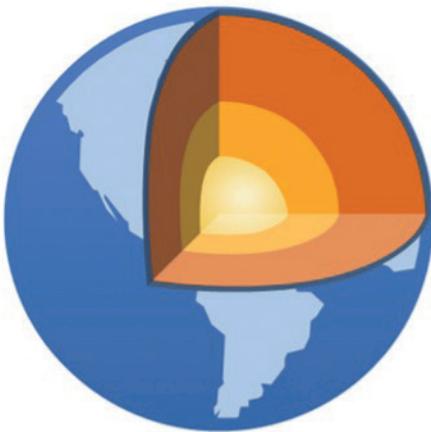
information must be taken in sequentially, if it is to be coherent and understandable.

Despite our eyes being able to admit both visual and verbal information into our working memory, they cannot do this simultaneously. This is an important point to remember.

Approaches to dual coding in the classroom

Number 1

One method is to present images and text next to each other (like in a textbook). This is more effective than the text alone.



The Earth has 4 layers.

The outermost layer is the crust which is the rocky layer upon which we live.

Below this is the mantle which is composed of, magma, molten rock.

Then we have the liquid outer core and solid inner core, both of which are mostly made of iron.

Pros

The written words remain visible, unlike spoken words, which are ephemeral, so learners don't have to hold them in their mind. This will reduce cognitive load as the transient information effect is avoided.

A carefully constructed explanation can be delivered without mistakes.

Cons

The eyes are the sensory means for acquiring both modes of information. Learners will incur a switching penalty as they glance from the image to the text, meaning an increase in cognitive load due to the split attention effect.

The visual and verbal information cannot be processed simultaneously so it takes more time to study the material.

If students are reading the information independently, they may make mistakes if there is novel vocabulary where the pronunciation hasn't been modelled.

If the teacher reads the information to the students, then they could look at the image, but this then renders the written words redundant. Students may be more likely to follow the text with their eyes instead of looking at the image whilst listening.

Number 2



Another approach would be to have only the image visible and provide the verbal information by speaking. This frees up students' eyes to focus on the diagram and their ears can gather up the verbal.

Pros

The visual and verbal information can be processed simultaneously, so is more efficient, and it reduces the cognitive load imposed by switching focus between image and text (modality effect).

Any novel vocabulary can be modelled and practised chorally to reduce the chance of mistakes.

The carefully planned explanation can still be delivered: the teacher could have it in front of them to read if they wished. You can also add a little more flair and relevant hinterland without creating an overwhelming amount of text.

Gestures can be used to direct attention to the relevant parts of the diagram as the sequential verbal information is delivered.

Cons

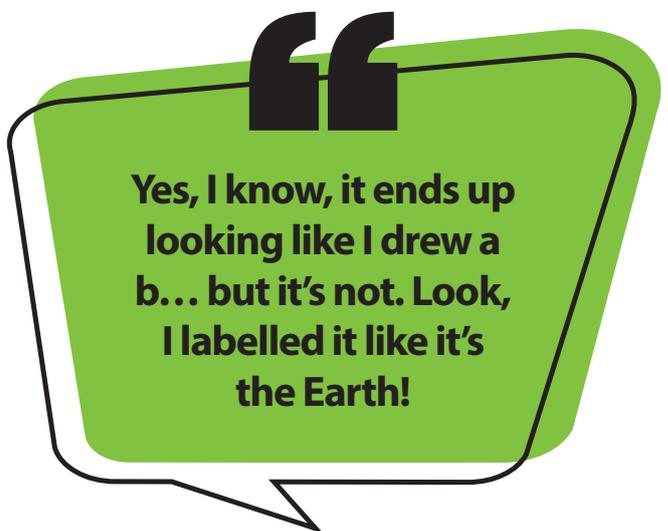
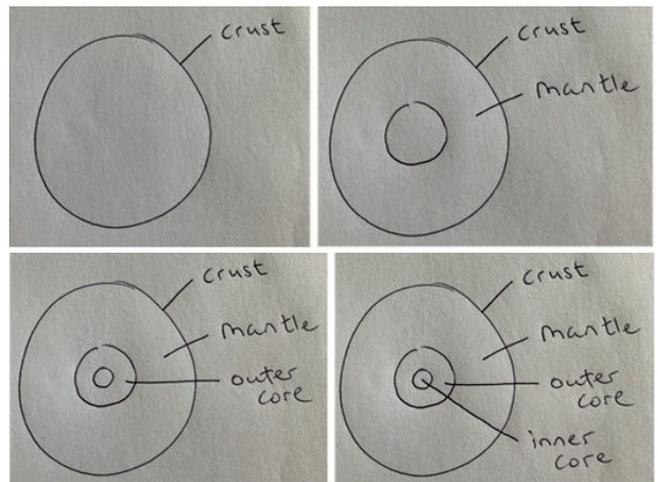
The spoken words are transient so students cannot re-check information as easily without interrupting the explanation.

The simultaneous processing of the visual and verbal information does have more cognitive load than each one individually, but less so than the two combined. However, you may need to consider how much information to deliver in one go carefully. Knowing your learners will aid this judgement immensely.

Number 3

Live drawing, on either the board or under a visualiser, is a fantastic way to facilitate dual coding for your students. Your gradually emerging visual information is complemented by your rich discourse as you build students' understanding of the concept you are delivering.

Adam Boxer's blog from December 2019 delves more deeply into this and a blog of my own from March 2019 offers another concrete example.



Pros

The main benefits mirror those of presenting the information as described above, but with live drawing you can gradually build up information more easily and responsively: you can add improvised tweaks if needed to help ensure understanding.

The diagram should be simple, meaning it won't have any extraneous features, and students should be able to easily draw it into their books.

You can add some humour and humanity based on the quality of your drawings... (see above!)

Cons

Sometimes the effects which can be achieved through animations are more beneficial to understanding than seeing a still image. This can be achieved through live drawing, but you'll need a rubber or things get messy!

The only other real barrier I have found when live drawing is the limitations imposed by my own penmanship and quality of handwriting (as seen above!), but these, as with all things, improve with practice!

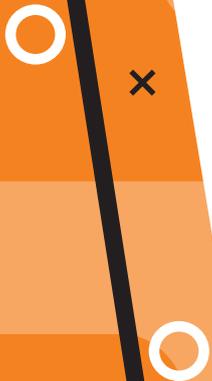
Make your choice

So, however you choose to enable your learners to benefit from dual coding, do so wisely and with care. Fairly simple concepts might be best delivered using method number 1, as students can more easily understand, whereas more complex ideas may require being taught in smaller steps and live drawing may be the appropriate choice.





A dip into our Enhanced CPD



10 Minute Mentors

10-Minute Mentors is an informal support programme that is available to all staff during the whole year. It involves a teacher-chosen focus, with any class at any time. The feedback is then given in a short and relaxed way within 24 hours of the lesson. A follow-up Lesson Spotlight is completed after an agreed amount of time to assess if the member of staff would like any extra support, and to see any suggestions in action.

This programme gives staff an open and supportive environment to improve their teaching practice, with feedback being received from an expert in their chosen focus.

Participating staff have found it an extremely useful and positive process that allows them to utilise colleagues to be able to be the best teacher that they possible can, and to give their students the best!

Some staff have also taken part in the programme with a focus on an aspect of remote learning and live teaching online. This enabled staff to become more confident with the new way of teaching, and this process is ongoing until the staff member feels they have achieved what they set out to!



Journal Club

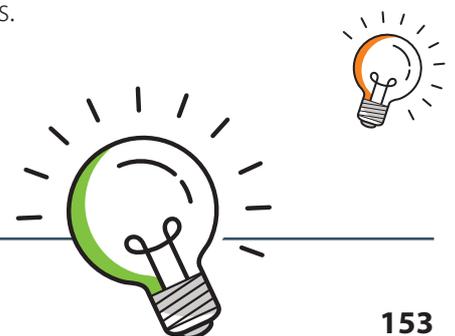
Each term a group of teachers meet to discuss a particular Teaching and Learning-focused article and look at how aspects of the text could be implemented in our own practice. Due to lockdown restrictions and the climate, we weren't able to look at as many articles as we usually would.

Term 1 – Working Inside the Black Box, written by Black et al. (2004)

This article focuses on questioning and assessment that are regularly used in the classroom. We looked at this to remind teachers of the different strategies we have at our disposal when returning to the classroom after five months of lockdown.

The article discusses wait time, stating that many teachers wait less than a second after asking a question. This prompted staff to consider how much time they give students to think about an answer before giving it. By giving students a longer amount of time to think about their responses, it increases the quality of their answers and promotes discussion amongst students. We also discussed the types of questions that you can ask to initiate different types of answers and discussions.

The article also considers different types of feedback and marking. We discussed in depth comment-only marking, and the advantages that it has. Students tend to focus on their mark or grade, not how they can improve their piece of work. We also discussed strategies for this and how it could be implemented in different subjects.





Insights from Trinity Institute of Education



Oracy – primary perspective

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Why talk about it?

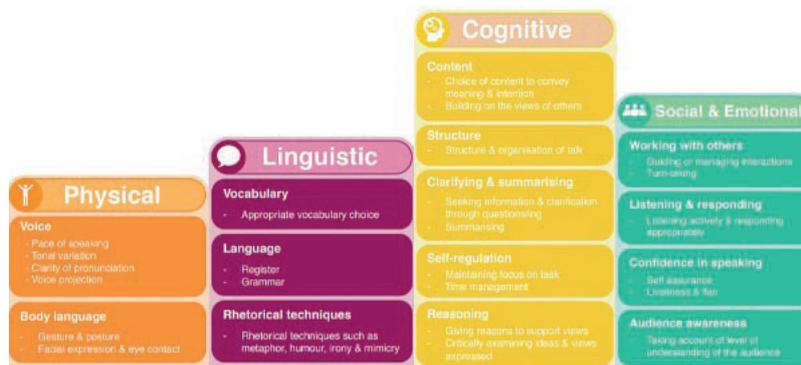
Teachers often speak about classes who talk too much. There still seems to be an influential view that ‘talk’ does not need to be taught, and that if students are talking, they are not learning. We all know that talking is crucial within the classroom and a fundamental part of the learning process – not low-level disruption or shouting out, but the talk that sparks deep learning, critical and collaborative thinking, and self-expression. Shockingly, children from low-income families are exposed to 30 million fewer words than their higher-income peers before age three, and the

language gap only widens over the course of their school career (Law et al., 2017, Language as a Child Wellbeing Indicator).

One third of the national curriculum is ‘Spoken Language.’ Oracy is not just talking, it is everything else that is added to talking, such as being able to talk, learning through talk, holding the attention of your audience, being confident and being able to articulate. The Oracy Skills Framework identifies four dimensions along which we can think about the development of speaking and listening: physical, linguistic, cognitive, and social and emotional.

The Oracy Framework

Use the oracy framework to understand the physical, linguistic, cognitive, and social and emotional skills that enable successful discussion, inspiring speech and effective communication.



Speech and communication are the central pivot of any classroom practice. It is the principal way in which teachers provide instruction and support to their students, and is central to how most students engage with the curriculum. The Communication Trust's 2017 report, Talking About a Generation, found that children who struggle with language or have poor vocabulary at age five are:

“
Six times less likely to reach the expected standard in English at age 11 than children who had good language skills at five.”

“
Ten times less likely to achieve the expected level in Maths.”

“
Twice as likely to have mental health difficulties, even after taking account of a range of other factors that might have played a part.”

“
More than twice as likely to be unemployed at age 34 as children with good vocabulary.”

Unproductive talk is often the outcome of students using the wrong ground rules, e.g. 'keep your best ideas to yourself' rather than sharing and evaluating. So, what is the solution to this problem? As every teacher knows all too well, not all student talk is educationally desirable. Schools who embark on improving the oracy of their students set and establish clear ground rules for talking. Professor of Education at the University of

Cambridge, Neil Mercer, cites that: "When groups follow appropriate ground rules, they are more likely to find good, creative solutions to problems. They learn how to use talk to get things done. When students learn how to use talk to reason together, they become better at reasoning on their own – and so improve their attainment in Maths, Science and other subjects."

Practical oracy ideas in the classroom

One way that I have in the past explored within my own setting is through using Pobble365 – this is a free site that has a bank of images that can be used in the classroom. Without having to focus on decoding words, energy can be directed at developing inference and critical thinking skills.

What can I see? What do I think?



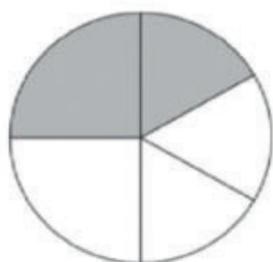
The first question focuses on facts and observations, while in the second, students are encouraged to make inferences. Through questioning and discussion, students are encouraged to develop their ideas and are supported to become critical thinkers. This is accessible for all students as they are not restricted by their reading level whilst introducing them to new vocabulary.

This approach also reminds me of the 'goal-free' problems in Maths, where the information is removed, leaving only the image for students

to create and answer their own questions, thus reducing cognitive overload. The image below is taken from the KS2 2017 Maths Paper 2.

23

In this circle, $\frac{1}{4}$ and $\frac{1}{6}$ are shaded.

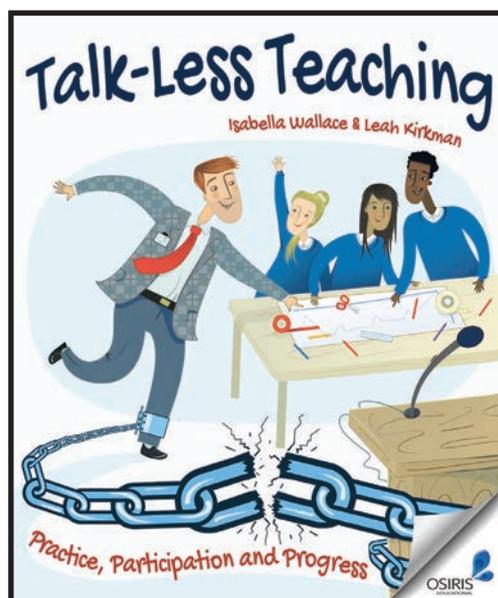


What can you work out?

Oracy should become a natural and focused part of every lesson. As practitioners, we should always:

- Get a student's attention first. How many times have we said or even thought that student X doesn't listen to instructions well?
- Give students time. Although many of us ask a question and give thinking time, sometimes we need to be more mindful of the actual length of time that we give.
- Try to use comments or prompts rather than questions all the time. Some students are less confident; if we question constantly, the students grow to fear the question.
- Model. In a Science lesson for example, if a student said that the paper towel soaked up all the water, we might reply with "Yes, it has absorbed all of the water." Through doing this, we expose accurate and new vocabulary.
- Encourage everyone to have a go.
- Talk with, rather than to, students. Through doing this, we are opening up conversations rather than a series of questions and answers.

Another one of my favourite strategies that prospered after some CPD is: 'String ball discussions' (Talk-Less Teaching by Isabella Wallace). This strategy uses string to track a small



group discussion; each student keeps hold of the length as the ball is passed between contributors. This strategy is great to spot students who are the passengers in any lesson, thus encouraging everyone to have a go.

Teachers can scaffold students' interactions and responses during lessons through using sentence starters. Many of these can be widely found in documents online, such as Progression in Language Structures, which although an older document has a progression throughout primary. Like the stem sentences for Maths and the national curriculum vocabulary lists, these need to be taught rather than becoming the wallpaper of the classroom.

"Vocabulary knowledge is knowledge; the knowledge of a word not only implies a definition, but also implies how that word fits into the world" (Steven Stahl, 2005). Students need to be able to use words across the curriculum in different contexts. Research indicates that we need multiple exposures (28–39 times) to vocabulary to be truly fluent. Within the classroom, it is vital that we aim to expose as much vocabulary as we can. One Education suggests that when commenting verbally on work, we could use the word 'exceptional' instead of 'great,' or instead of saying 'line up next to the wall,' we could try saying 'line up adjacent to the wall.'



Remote Learning at TIE

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The last thing we could have predicted for 2020 was a national pandemic, but in March 2020, it happened. Schools were hit with the decision to close and continue learning through online remote education. ITT providers and universities were told that trainees had to be pulled out of schools and assessed practice would stop. Trainee Teachers could only venture into schools during the first lockdown through volunteering. This meant six months of potentially not being in a classroom and developing until their NQT post.

Ofsted have since reflected that: “The potential for learning loss at the beginning of the pandemic was exceptionally high for children in England” (Ofsted: Remote Education Research, February 2021). It was also clear to trainees and training providers that the same was true for ITTs. The landscape had changed rapidly and immeasurably, and School Leaders and teachers were having to adapt, meaning that trainees were not in the thinking; the focus was on remote learning. The report also emphasises that “some schools found it easier than others,” noting that some School Leaders “showed a great deal of foresight before the March 2020 lockdown” and therefore adapted well and provided clear expectations and tools for staff to follow, whereas others had much more to do and took longer

to get to grips with the new normal. Therefore, where trainees did volunteer, they had very mixed experiences and levels of support.

At the start of the pandemic, there was also little research about the most effective ways to deliver learning remotely. This presented further challenge as there was little evidence to draw on in deciding next steps and ensuring that the learning delivered was having the desired impact. One of the early studies by the EEF, published in April 2020, gave some solid conclusions and served as a useful foundation to build upon. The main findings were:

- Teaching quality is more important than how lessons are delivered.
- Ensuring access to technology is key, particularly for disadvantaged pupils.
- Peer interactions can provide motivation and improve learning outcomes.
- Supporting pupils to work independently can improve learning outcomes.
- Different approaches to remote learning suit different tasks and types of content.

EEF Remote Learning: Rapid evidence assessment – April 2020

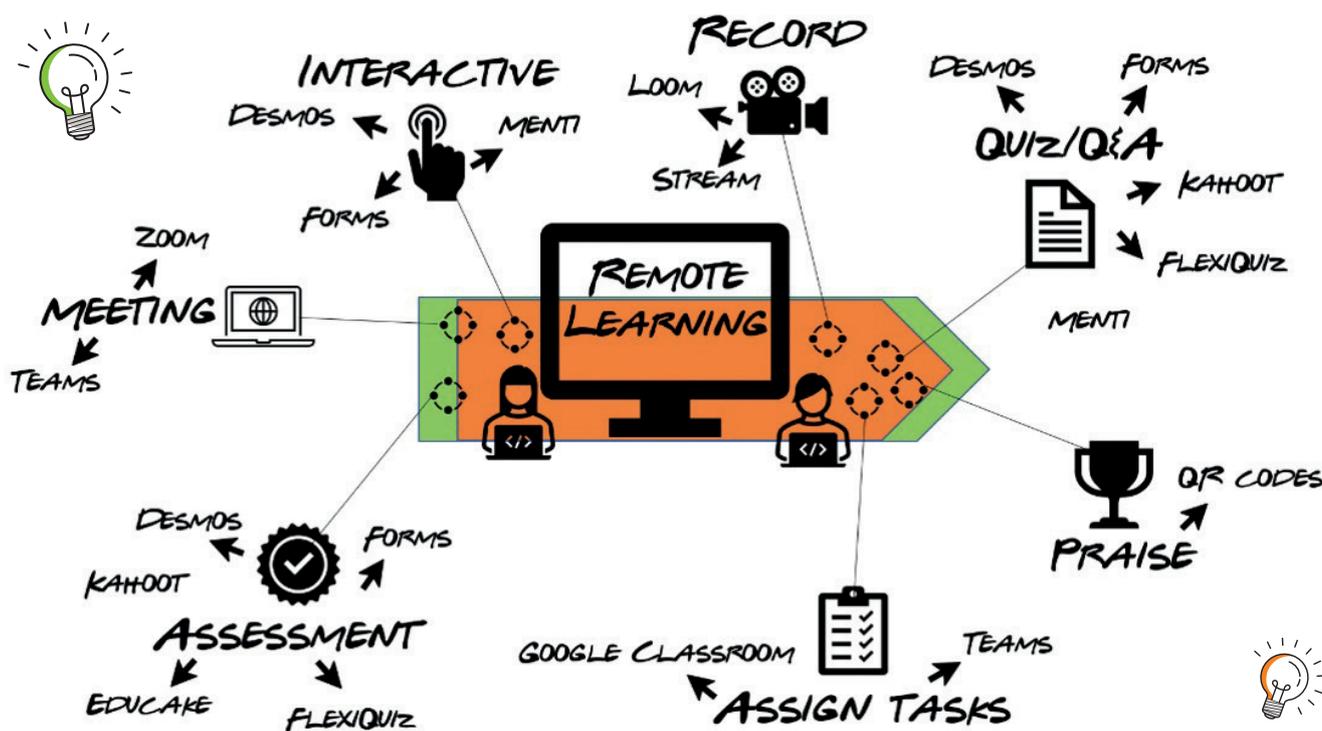
The findings clearly outline that the quality of teacher input remained a key factor and meant that ITTs needed to adapt their methods rather than start afresh in their learning about pedagogy. As a result, there was a significant focus on the quality of teaching, and the variety of technological packages and solutions which would enable teachers to deliver learning.

To continue professional improvement for trainees, various forms of technology were explored and set up in a short space of time. Schools discovered various options and computing giants offered various choices. If you had a Microsoft email set up within your school,

Teams and Forms were your preferred route, whilst gmail chose Google Classrooms.

Trinity Institute of Education (TIE) opted for Zoom and Teams. Both offered similar criteria, but Zoom allows you to see more participants, create breakout rooms easily and send out polls to make your sessions as interactive as possible. Of course, you faced the odd mistake from getting to know new technology – I managed to invite my whole cohort to one trainee’s mock interview!

After summer, we had progressed and researched well to find applications that would best suit the needs of our classes through live teaching and async learning with our new trainee teachers if needed... and we did need it! There are a wide variety available for different needs ...



Trinity Institute have 30 secondary and 24 primary Trainee Teachers placed in over 25 schools across West Yorkshire. One of the first hurdles we faced in September was teaching our trainees how to teach in both Covid and non-Covid times with mentors who were equally learning on the job how to teach in the Coronavirus era. Each school

also had their different set of guidelines for how to manage students and control the spread of the virus. Trainees took the challenge and soared, supporting schools when staff had to isolate or through catching up students/groups who had lost learning time. At the start of the year, it felt as though schools may find extra bodies a hindrance

in these tough, unknown times, but they proved themselves to be a most valuable asset!

When the January lockdown was announced, lots of placements had to change to support schools with the mammoth task ahead and trainees continued in their teaching development. The greatest announcement was allowing them to continue working with schools to deliver their remote learning in whatever format that took. Some have been on-site every day, delivering live lessons and Trinity TV, whilst others got to grips with the various technology applications that would support their delivery through this period and, most importantly, the interaction and engagement of their students.

“I am so pleased we were allowed to continue supporting schools in the January lockdown. I was worried that we would just continue theory-based sessions at home online. I joined TIE to be in a classroom from day one and that was the only place I wanted to be. I had the privilege of moving to my second placement and my main focus was to get stuck in and support in whatever way I could.” Primary Trainee Teacher

Trinity Institute created a variety of Loom videos to guide trainees through using the various tools that each school used. Each school was using something slightly different and it was our job to help trainees with their confidence in using. A daunting task, but one that supported our own technological understandings. We were not just supporting ICT in the classroom, we were bringing ICT into the student home. The laptops that trainees were provided with as part of our ITT package were coming into full use.

Loom has been the most popular accessed guidance video as it enables trainees/teachers to record themselves on to a PowerPoint or screen to guide their students through their work and/or how to carry out a task. The purpose of Loom is to upload to the remote learning platform and

students can work through this at their own pace. It is a much easier piece of software to use than stream as it does not require a vast amount of tickboxes/windows to complete. It is quick, simple and very straightforward.

“I just wanted to personally thank you (TIE) for introducing the primary cohort into using Loom. I have been using it this week for my online lessons and your instructions were so useful! I think I may have had a meltdown having not had that practice we had a few weeks ago!” Primary Trainee Teacher



Once trainees had mastered recorded lessons and live lessons, the next challenge was to create more interaction with their cohorts. There is a huge difference between primary and secondary live lessons; primary pupils are happy to have cameras on and give you a guided tour of their house, showing you every family member and pet along the way. They need the interactive sections to focus them. Secondary, however, leave you wondering if you are actually talking to anyone with their blank screens and silent responses. They need something to engage them and give them the motivation to be involved. How could we do this? Two applications we have discovered are Desmos and Menti. Desmos is promoted by Maths teachers as it allows you to use Maths language within the tool, but it is a great device for all subjects. It also allows you to see students carry out the activities you plan in real time. This means if they carry it out in a live lesson, you can give verbal or private message feedback to guide students who are struggling or have misconceptions/mistakes. Desmos allows you to use text and images to support students' understanding of a topic/lesson through various slides that you as a teacher create. My favourite

As part of the TIE interview process, we looked at Flexiquiz to use for our numeracy and literacy tests with applicants. We do have to pay for the use of this online software, but it means that we can personalise and brand our forms, we can add timers and ensure that candidates do not copy and paste information from the internet, as well as marking their answers and providing certificate achievement if they pass. Assessment and reward in one! We will be continuing with this facility after lockdown due to how effective it has been and the amount of positive feedback regarding how professional it looks.



Finally, an innovative way of praising students and allowing parents/carers to see their child's work is through QR codes. By linking a QR code to an image of the student's work, you can celebrate their achievements whilst still allowing them to witness and appreciate what they have produced. The QR code can be sent to them via an email, supporting positive praise as well as keeping that teacher/guardian communication.



If we are to take a tiny positive from the pandemic, it is our development in how to use technology effectively. Don't leave behind everything you have learnt – utilise this new knowledge in your lessons wherever you can.

If you are interested in viewing some of the TIE guidance videos, get in touch at: contactus@tie.trinitymat.org and we will happily send them to you.





Igniting the flame within teachers
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