



CENTRES FOR EXCELLENCE IN MATHS



Capel Manor College



**Buckinghamshire
College Group**

Aylesbury Wycombe Amersham

Exploring impact of interventions based on the use of positive language and growth mindset activities have on GCSE maths resit students

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A special mention goes to all our students, who despite the struggle, lockdowns, setbacks and other difficulties, have shown willingness, dedication and hard work to continue attending and participate positively in their maths lessons.

About CfEM

Centres for Excellence in Maths (CfEM) is a five-year national improvement programme aimed at delivering sustained improvements in maths outcomes for 16–19-year-olds, up to Level 2, in post-16 settings.

Funded by the Department for Education and delivered by the Education and Training Foundation, the programme is exploring what works for teachers and students, embedding related CPD and good practice, and building networks of maths professionals in colleges.

Executive Summary

All three Further Education colleges involved in this Action Research project had one aim, to explore the strategies and approaches to help to change students' mindsets. The Buckinghamshire College Group chose to focus on helping students getting "unstuck". The change that they hoped to achieve through their action research was for more students at least starting questions that are worth 4+ marks and reduce the numbers of students getting 0 marks by skipping past the questions. Meanwhile, Harlow College and Capel Manor College staff decided to explore use of specific growth mindset language, approaches to teaching and changes in the Schemes of Work, to explore their impacts on the mindsets of students involved in this research.

Teachers at Buckinghamshire College Group found a notable changes in students' mindset compared to what it was at the start of the year, and they attributed positive changes to the intervention. By the end of the year, more of their students had at least started to attempt more complex (4+ mark) questions, felt more confident and were less afraid of giving practice exam questions a go. At the same time, there was a shift to more students trying and successfully applying the Growth Zone model, including understanding strategies for moving between the Zones.

Teachers at Harlow and Capel Manor Colleges also observed frequent changes in students' mindsets from Fixed to Growth and vice versa, influenced by various factors, including negative Mock Exam scores and getting questions wrong when believing they have done everything correct.

In summary, we strongly believe that with the right strategies it is possible for educators to positively influence learners' mindset. However, this requires a great deal of patience, sufficient time and a highly individualised approach. It is a slow but rewarding process.

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Background

Three Colleges

There are three colleges taking part in this action research, all located in relatively close proximity with each other, in South East of England. The aim for all three colleges involved in this AR is to help their learners to adopt a positive mindset, build resilience, self-efficacy and to realise their full potential. Harlow and Capel Manor Colleges have set to investigate the impacts of positive messaging and relationship building, and how students' beliefs about their abilities in mathematics could impact their learning. Buck's College group has taken slightly different approach and explored the strategies on how to help students to "get unstuck".

As other students across the FE sector, students from all three colleges were significantly affected by two years of on/off lockdowns, lacking social interaction skills, school discipline and self-esteem. With little chance of GCSE exam practice, due them being cancelled for June series, the students only had limited opportunities to resit them only in Nov series.

Whilst Harlow College and Buck's College have returned to face to face learning, Capel Manor has continued online delivery of their GCSE Maths lessons.

Our Study

Following a review of the literature in the area of mindset interventions, this study proposes to investigate the following question:

What impacts do interventions based on the use of positive language and growth mindset activities have on GCSE maths resit students?

The design of the research process will be guided by the following objectives:

Can 1:1 session with a maths teacher impact on a student's mindset?

- What is the impact on the student-teacher relationship in the classroom following different approaches?
- How do student behaviours and attitudes change in the classroom following the use of positive language in class?
- What contributes to a mindset not changing?
- Do the mindset interventions have an impact on student behaviours and attitudes beyond the maths classroom?
- How do students feel towards maths?

Research aim

Students' academic success is influenced not only by their cognitive abilities and content knowledge, but also by non-cognitive factors, such as their beliefs, attitudes and values. One influential non-cognitive factor is students' beliefs about the degree to which intelligence is a stable trait, termed "mindset" (Dweck, 1999). Even before the Pandemic, the students struggled with the resit maths lessons, as coming from the schools, the teaching and learning environment was somewhat different for them. It was double important for us to understand our learners' mindset and perceptions better, given the fact that they have not had face-to-face maths education over the past two years. As online lessons go, they can be good learning tools however, some schools have not been prepared to switch to them when the lockdowns have started. It was evident to us that our students had a range of mixed experiences with their online lessons.

As the whole FE sector was still recovering from the effects of the past Covid-19 lockdowns, we thought about what impact the Teacher Assessed Grades (TAGs) had on our students' sense of self-worth and their mindset. Even for the students who have been awarded grade 4 or higher in their TAGs, they might be perceived as of lesser quality due to the absence of the traditional exams, but failing in their TAGs would have a detrimental effect on their confidence and self-esteem. *We wanted to find a system which supports students' learning and achievement in ways that promote a positive mindset, and well-being, so that when they move into the next phase of their journey, their education to that point has enabled them to move toward the adult world with resilience, confidence and can-do attitude.*

During the outset of the project, teachers at Harlow and Capel Manor set out to discover how student mindsets towards intellectual effort and challenge affect learning outcomes. The aim was to investigate and potentially influence learner mindsets and attitudes about the challenge and mental effort.

Three teachers took part in the AR project at Buckinghamshire College Group, led by the Head of Maths with a focus on interventions that could have a positive impact on the mathematical growth mindset. The teachers who carried out the research were chosen as being ones who were already engaged in developing the mathematical growth mindset of their students. In addition, there is widely available research on mindset change in school children and the effects it can yield, however in comparison, there is very little on this in the FE sector. In some small way, we hope to bridge this gap with this action research project. Working with Post-16 learners required agility, planning and resilience.

In support of this research, we have built on the findings from our previous AR, which looked at supporting learners in a 121 environment and the impact it had on their motivation and engagement in and outside of maths lessons. Whilst we did not explicitly look at growth mindset messaging and strategies, we worked on building mathematical resilience and bridging the gap. It could be said that in some ways, the current AR is a continuation of work undertaken in our previous CfEM project.

Literature Review

A vast amount of research has taken place on how students' mindset effects their performance, and as one would expect, a variety of strategies stemmed out of this research. In our roles as FE Maths teachers, we must ensure we are current and up to date with what's going on in our field. The most recent report by the Sutton Trust suggests that the impact of recent lockdowns due Covid-19 would have a long-lasting impact on current learners for many years to come.

"Growth Mindset" is a phrase coined by Stanford University College Professor Carol Dweck, who promoted the idea that intelligence can be developed through perseverance and effort rather than being an innate quality which is static (i.e. a fixed mindset). Having a "growth mindset" applies the metaphor that the brain is like a muscle which grows stronger and more powerful with rigorous training (Aronson et al, 2002). In contrast, having a "fixed mindset" would mean that because intelligence is viewed as being static, it would be pointless in trying to instil this in subjects who are not naturally talented and the very fact that such individuals feel challenged and are having to put in so much more effort is evidence in itself that they are unlikely to succeed (Dweck and Yeager, 2019).

A growing body of current and past research all point towards to the impact of Growth Mindset messaging, and the effect strategies can have on student's achievement over time (Trzesniewski, & Dweck, 2007). However, most of the research has been done with the students up to the age of 16, and there is a gap that we aim to fill for the post-16 education learners, more importantly to analyse whether or not such approach would yield the similar results to those conducted in the secondary education setting.

It is vital to note that GCSE resit learners have already had a negative experience with maths, having failed their recent assessments and these learners have gone into FE with the expectation to fail it again, and again, feeling trapped in the endless loop of failure. However, as noted by Hassanbeigi et al. 2011, these failures are often due to lack of organisation rather than lack of ability. Learners' fixed mindset towards their inability to achieve their maths GCSE often 'prevents them from seeking help and exerting effort' (Hwang et al., 2019, p. 263). Students with a fixed mindset, as research indicates, seem to underestimate that their lack of effort may contribute to poor achievement in maths; this way of thinking can hinder their ability to become resilient when they experience what they deem as failure (Hwang, et al., 2019). In their two-year study, Hwang et al. (2019) illustrate that a fixed mindset predicts lower gains in academic achievement for low-achieving students than their high-achieving counterparts. In other words, lower achieving students with a fixed mindset tend to show a decline in their maths achievement.

When it comes to the students' mindset, there are two main mindsets to note. Those with the "Fixed mindset", who believe that to be good at maths is an innate ability and not anything caused by the effort, thus often give up at the first opportunity (Dweck, 2006; Robin & Pals, 2002). On the opposite end of the spectrum, students with a "growth mindset" are strong believers that success is in line with the amount of efforts one puts in. They look to improve, not shying away from making mistakes and using them to improve (Dweck, 2006). Professor Dweck believes that encouraging a growth mindset in students leads to better learning and behavioural outcomes and has both conducted and been the inspiration of various research projects which back this up. In a 2012 publication of Dweck and Yeager, they describe people's belief in their own ability as "implicit theories" which can take one of two forms i.e. an entity theory of intelligence (or personality), which is fixed, or an incremental theory of intelligence (or personality) which is malleable and can therefore be changed and developed.

According to wider research, the students are motivated by two different types of goals- mastery and their performance. For instance, the students may be set goals to pass their GCSE maths (and success in their eyes is often measured against their peers). Whilst the mastery approach to goal setting places greater focus on long-term skill development (Ames & Archer, 1988). It is no surprise to see that students with fixed mindset are associated with the performance type of goals, whereas those with growth mindset are correlated with the mastery goals. Smiley & Dweck, 1994, talk about how motivation and positive messaging can have long-lasting impact on students' overall performance and play a key role in reducing their overall anxiety towards learning. When students feel anxious about their learning, in maths for instance, it is likely that they will resent, try to disrupt and fall further and further away in their education.

An interesting experiment by Mangels et al. (2006), noted that learners with growth mindset seem to be more aware of their mistakes, and thus were more eager to learn from them, correct them and use those mistakes as learning curve. In comparison, their peers with a fixed mindset did not seem to react well to their errors, and feedback that came with those errors and have shown significantly lesser tolerance to their mistakes. The latter can then lead to emotional difficulties, anxiety and absence of strategies to deal with these kind of emotions (Dweck, 2006).

The very same research suggests that students with a fixed mindset can eventually transform their thinking with the right approach, deploying appropriate strategies and support from the educators (Dweck, 2006, 2011). It is, however more challenging in the FE sector where students would have most likely had a previous negative experience whether with learning, assessments, or both. For these students wider strategies are needed to be deployed to cover the emotional and intellectual differences between these two age groups of learners. Whilst our literature review clearly shows that ample investigation has taken place regarding secondary education, and much of it demonstrates that even an occasional mindset intervention can have a positive impact on students and their learning outcomes, more evidence is needed to determine how effective mindset interventions can be for GCSE resit learners.

The lengthy project by Oakes and Griffin, 2017 has identified five-part model (VESPA model) to develop the skills that are associated with changing positive mindset.

Vision- they know what they want to achieve

Effort- they work hard and conduct many hours of proactive independent study

Systems- they organise their learning resources and their time

Practice- they use deliberate practice and develop their skills

Attitude- They have a growth mindset and respond constructively to setbacks

The recent research suggests that above model is successful if deployed correctly, and placed a greater impact on 1:1 intervention and on students' perception of their own abilities and learning path. Research conducted by our own Centre for Excellence in Mathematics, Harlow College (Kimeng and Zarnadze 2020/21) has also supported this approach. It showed that a change of/ or at the very least improvement in students' attitude towards mathematics improves their engagement and attainment

Even relatively short and informal interventions have been found to be effective in influencing students' theory of intelligence. Paunesku et al (2012) randomly assigned 200 students enrolled in developmental maths courses at US community colleges to read either an article about incremental theory and the brain's ability to grow or an informative article about the brain which made no mention of its potential to develop or improve. All 200 participants also wrote

mentoring letters to future students explaining the key messages within the respective articles. Although this was an exercise that took only around 30 minutes to complete, dropout rates from the course were twice as high among students in the control group as opposed to those in the experimental group, whose students achieved higher grades and were also more likely to pass. Dweck and Yeager (2012) attributed the success of this intervention “because it changed the meaning of challenges—instead of challenges making students feel “dumb,” the challenges offered a way to get smarter. This belief was crucial for promoting resilience”. This means that students first need to understand how the brain works and processes information, in that the act of struggling in order to process new information causes the brain to grow new neural connections. Struggling with understanding and feeling challenged is therefore an integral part of developing the brain and should not be regarded as a sign of weakness or failure. Weisburg et al (2008) demonstrated that psychological arguments are more compelling when accompanied by neuroscientific data so it is essential that these facts are presented and explained to students and regularly reinforced with them as part of their learning strategy.

Praise is also important in building resilience in students, however it must be done in the right way. Mueller and Dweck (1998) found that praising students’ intelligence or ability encouraged them to develop an entity theory of intelligence, thus making them more resilient when encountering learning setbacks. Equally, Rattan et al (2012) found that trying to comfort struggling students by telling them, for example, that they were just not “a maths person” had a negative effect on their resilience and actually resulted from the entity theories of the teachers themselves, in that the teacher did not believe that such students had the ability needed to improve in the subject. Mueller and Dweck (1998) found that, in order for praise to succeed, it must be directed at the process the student has used to solve the problem or complete the task, rather than at the intelligence of the student. This was re-iterated by Dweck and Yeager (2012): “Research on implicit theories shows we should not praise children for being “smart” when they do well, but rather, to promote resilience, praise them for the process they engaged in—their effort, their strategies, their focus, or their persistence”. Likewise, when students are struggling, Rattan et al (2012) recommend encouraging them to meet with a tutor to improve their strategies, indicating that it is the strategies being used that are lacking, rather than their own intelligence or ability. In this way, students’ resilience remains intact and they are not discouraged or demotivated when challenged, instead looking for alternative strategies by which to complete the task. Paunesku et al (2012) formula for success is defined as “Effort + Strategies + Help from Others”.

Methodology

Aim of this AR was to explore whether or not it was possible to a) change students' mindset and b) to help them maintain the growth mindset and build mathematical resilience. The Action Research Group consisted of seven (7) teachers across three colleges. The teachers across all these colleges met at least once every 8 weeks to discuss approaches and intermediary findings amongst themselves, what worked and what needed to be changed.

The first cycle of the research involved all teachers involved in the AR to conduct wide range literature review, drawing ideas from the previous research undertaken elsewhere. Then we sent out anonymised questionnaire to students regarding their mindset. This was delivered using MS Forms, which made data collection easy. The results then analysed using appropriate sorting and coding using both, MS forms and Excel.

It was vital to maintain the confidentiality and anonymity of all participating students particularly given the emotive subject area. Therefore, all questionnaires were designed in such a manner that no personal data was requested. The colleges participating in the coaching only shared headline anonymised data.

With two out of three colleges back to face to face teaching, and one online, the student participation rate varied between them. This difference became more noticeable when arranging student interviews. Some students were not keen/refused to be interviewed, even with the assurance of anonymity.

Results and Discussion

Intervention at Buck's College Group

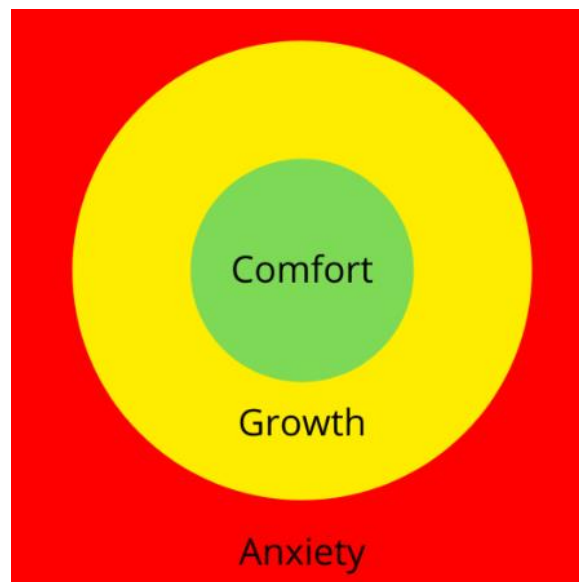
Each of the three teachers used the 'getting unstuck' approach with one of their groups, three groups in total across the campuses.

The intervention started with a lesson dedicated to getting unstuck.

As a starter students were asked to write down responses to the sentence "When I get stuck I...", this led to a discussion about how students feel and behave when they get stuck.

One teacher commented "It was nice to read reactions/comments from students about when they are stuck. Many students were not comfortable to discuss openly or share with the class."

Students were shown a typical problem solving-style question and asked to place their feelings in the green/ amber/ red growth zone.



(Lee & Johnston-Wilder, 2013)

As a way to get look at problem solving more generally they were given a padlock challenge, which they completed in pairs or small groups. A series of short activities led to single-digit answers, which combined to give a padlock combination that revealed a prize. At the end of the activity students were asked to think about what problem-solving strategies they used. The discussion from this led in to producing a 'getting unstuck' poster.

One teacher commented "It was good to watch them on how they approach this particular question. Students were excited to do group challenge."

The teacher then moved on to looking at a maths problem and encouraging students to apply those same strategies. The group answered the first together, exploring strategies for solving.

The teachers continued to use the language of 'getting unstuck' in future lessons to get students used to the idea that it was OK to be stuck but they had a toolkit of resources.

In the final lesson the teachers repeated the growth mind set activity. The teacher showed a problem solving-style question and students were asked to rate how they felt about answering it.

Intervention Harlow and Capel Manor Colleges

Among the ways implemented to engage students, teachers at Capel Manor would deliver a set of about 7-10 Focus 15 questions per lesson each week, before and during which I would remind students of the value of making mistakes in terms of better learning. The similar change was also implemented at Harlow, where teachers would also remind students of valuable findings from brain research towards their learning, i.e. the brain is expanded in terms of neurons and connections between them each time one learns something new. The use of Growth Mindset language was emphasized, which involved more one to one conversation with students, target setting and rewarding small wins each time. reflection on current mindset being employed and use of strategies to improve learning. Below is one of the examples of pro-forma for each topic covered, promoting thinking and reflecting for learners.

Colour in the arrow, up to the statement which best describes your current understanding.

	I'm so confident - I could explain this to someone else!
	I can get to the right answer but I don't understand well enough to explain it yet.
	I understand some of this but I don't understand all of it yet.
	I tried hard and I listened but I am finding this challenging. I will make sure that I get help with this next lesson.
	I do not understand any of this yet. There are things I could do to be a better learner next lesson.

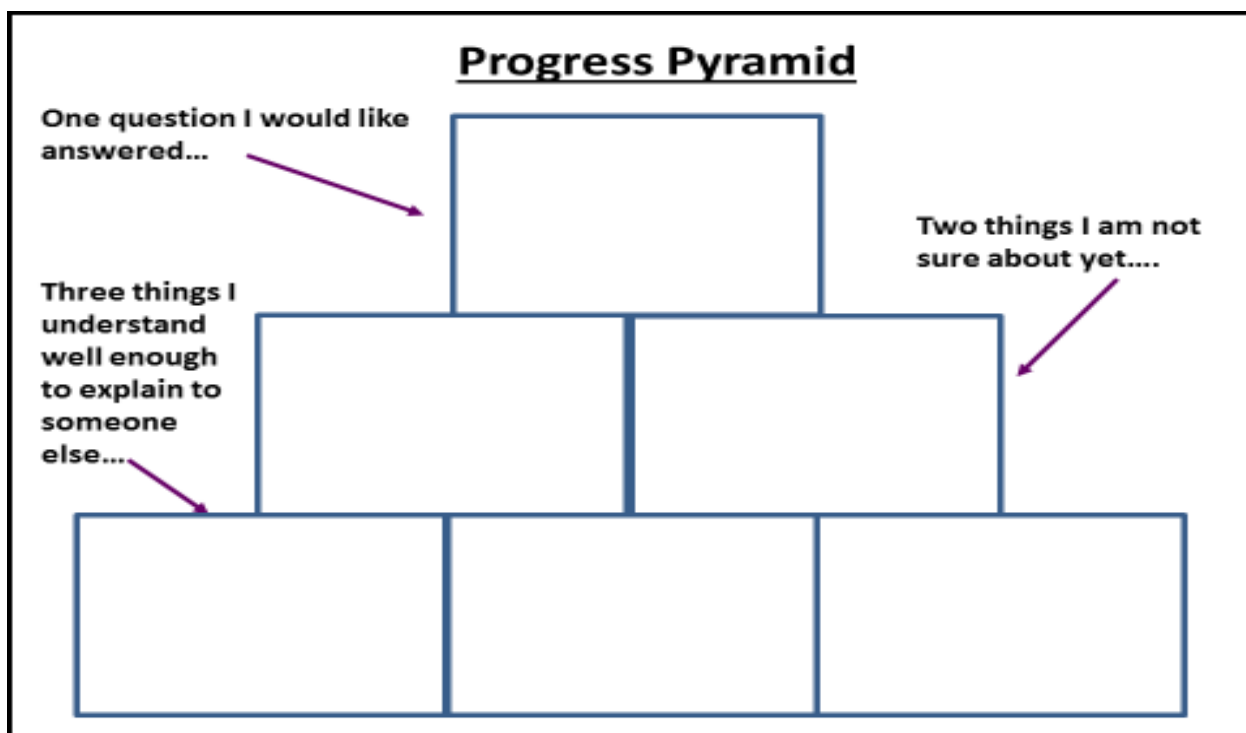
My Favourite MISTAKES

Mean
I
Start
To
Acquire
Knowledge
Experience
Skills

A mistake that moved my learning on.....



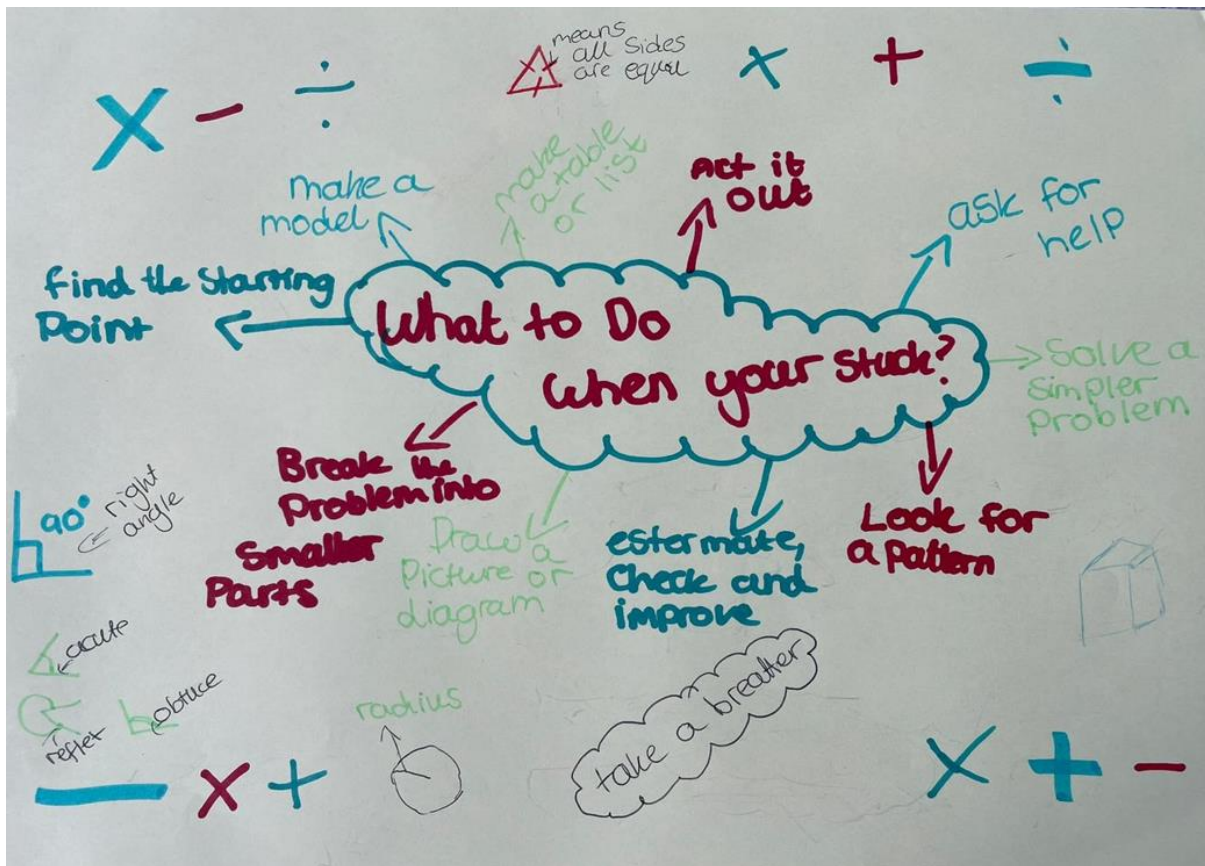
Which mindset did I demonstrate?	Mark each scale with an arrow.
Did I use whole class discussions / explanations as learning opportunities? (Did I listen? Did I ask questions? Did I contribute answers or make suggestions?)	Never Sometimes Always
Did I work on tasks that challenged me?	Never Sometimes Always
Did I use strategies to 'un-stick' myself when I found the tasks difficult?	Never Sometimes Always
Did I check my work for mistakes and correct them?	Never Sometimes Always
Did I put as much effort as I possibly could into the tasks?	Never Sometimes Always



Tips I would give a friend to solve this problem are	I have made a link between this topic and ...	To help me move forward, when I got stuck today, I
Today I interacted with the teacher by	Today I am still unsure about To fill in this gap I intend to	A barrier to my learning today was..... I will try to overcome this by
Today I explained to how to	Something I have learnt today about the way I learn is	At home, I need to look at

Outputs

Students at Buck's College Group enjoyed thinking about the idea of getting unstuck and worked together to produce a 'getting unstuck' resource, such as this poster.



Growth Zone Model Results

Students were asked to rate their feelings using the Growth Zone Model when looking at a complex, problem-solving style question. The responses were recorded at the start of the first lesson and then during the last week of the intervention.

Aylesbury	Before			After		
G9	R	A	G	R	A	G
1	Y			Y		
2	Y				Y	
3	Absent			Y		
4	Absent			Y		
5		Y			Y	
6	Y				Y	
7	Y			Y		
8	Absent			Y		
9			Y			Y
10	Absent			Y		
11	Y			Absent		
12	Y				Y	
13		Y			Y	

14	Absent				Y	
15		Y			Y	
16		Y			Y	

3/11 (27%) of the students with two results showed an improvement in how they felt when looking at a complex, problem-solving question.

Amersham	Before			After		
G9	R	A	G	R	A	G
1	Y				Y	
2		Y			Y	
3		Y				Y
4	Y				Y	
5	Y			Y		
6	Y			Y		
7	Y			Absent		
8	Y			Absent		
9	Y				Y	
10		Y				Y
11	Y				Y	
12	Absent			Absent		
13		Y				Y
14	Y				Y	
15	Absent				Y	
16	Absent			Y		

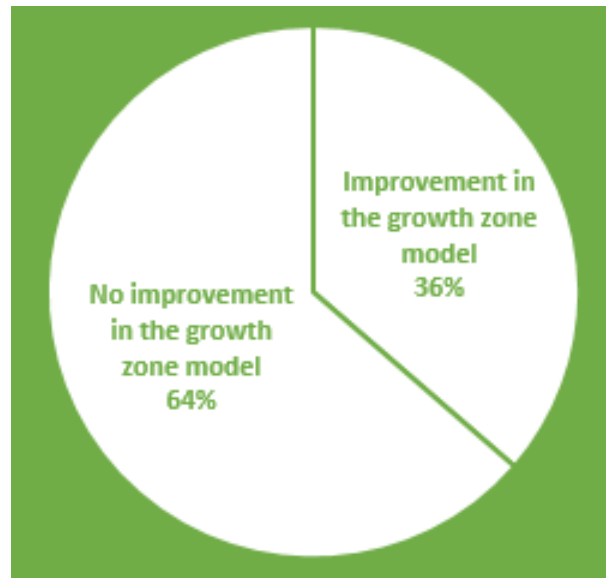
8/11 (73%) of the students with two results showed an improvement in how they felt when looking at a complex, problem-solving question.

Wycombe	Before			After		
G11	R	A	G	R	A	G
1	Y				Y	
2	Absent			Absent		
3	Y				Y	
4	Y				Y	
5	Absent			Absent		
6	Y				Y	
7	Y			Y		
8	Absent			Absent		
9	Y					Y

5/6 (83%) of the students with two results showed an improvement in how they felt when looking at a complex, problem-solving question.

Overall, we saw that 16/28 students stated that they had improved using the growth zone model.

Although this is not as big a change we wanted to see, it's useful to see what is possible using only a change in the language used in the classroom.



Heat Map Results

After each assessment we produce a heat map for students to support planning of lessons and help students to focus their independent study. We already had comprehensive heat maps from mocks held in November and March. These are RAG rated for each question. It is possible to see at a glance where individual, or even groups of, students are getting questions right or wrong.

We had hoped to replicate this for the final mock paper but a change in date meant we had very little time to get the marked papers back to students. As a compromise we created a heat map of total page scores, rather than for individual students, for two of the three groups.

Although it's difficult to rigorously analyse this data the simplicity of the heat map is that it is possible to get a sense of how a class are doing by just looking at the spread of red, amber, green.

With all three of the November heat maps it's clear to see bands of green, then amber, then red moving through the paper. The last third of the paper for all groups is largely red, with occasional amber and green entries for single students.

The March mock heat map for the Aylesbury and Wycombe groups do show more amber and green areas in the last third of the paper, showing students are attempting questions in the latter parts of the exam.

The use of the growth zone model was quite a simple way to track how students feel about attempting complicated questions but as it tapped into emotions students found it easier to relate to the red/ amber/ green zones. Of the students where we had two sets of results to compare, 36% had an improvement in their growth zone area when looking at complex questions.

The use of the Growth Zone model was a simple intervention across all three colleges and results show that with a change in the language we are using with students, to normalise the

idea of getting stuck and unstuck, for just a limited time can make a notable difference to students.

Starting this process earlier in the year would have helped to create more of a culture of 'getting unstuck' within the student group. This would have also helped students and teachers to be less impacted by issues such as covering and merging lessons.

At Harlow and Capel Manor Colleges, students enjoyed maths lessons- this was perhaps attributed to the individualism of each teacher involved, and more so the same teacher using Growth Mindset language and approaches to show they believed in their students. Unfortunately, from the surveys conducted, there was no notable shift in mindset. Instead, slight lean towards students not being afraid of making mistakes, and not giving up when they make mistakes.

It was found that:

- Over 90% of students were of a fixed mindset with growth "flavours"
- 40% of students believed that their maths was never going to improve, no matter how hard they tried
- This measure was reduced to 25% after the post-intervention questionnaire was given
- 65% of students thought they knew if their work made sense, compared to 38% before the intervention
- The hardest part was to maintain the growth mindset as the students were easily switchable to "I can't do this" mindset, with the help of most minor external or internal factors

Our goal was to influence students' mindset and change it from fixed to growth, enabling them to be more open to ideal of making mistakes, and learning from them. As we have learnt from our initial survey, almost 95% of those involved had somewhat fixed mindset towards learning. Post intervention survey and interviews highlight some significant shifts that are worth discussing. Bringing a few quotes from students' interviews, sheds light how they felt before and after the intervention:

"Nobody has taught us like this, we feel part of the learning process, and even when I make a mistake, I do not feel I am being judged but encouraged to try in different ways."

"Teacher telling me they believe in me has given me a boost I needed."

"One moment I believe I can do it, and then I make a stupid mistake and it all comes down crushing."

It is very evident from the individual interviews and the post-intervention questionnaire, that with the right strategies, positive, genuine messaging across each and every lesson, we can change students' mindset. The more difficult task however, remains to maintain such a mindset.

Conclusions and Recommendations

Conclusions

The change that we wanted to see was more students at least starting questions that are 4+ marks and more being able to get full marks. We wanted to reduce the numbers of students getting 0 marks by skipping past the question. We could see from looking at the two sets of heat maps that students were attempting more of the harder questions at the back of the paper.

Linking initially to something not related to GCSE helped students to see connections with solving problems in a more general way and pull out strategies that can be used in their maths classes.

Students were readily able to talk about how they felt a maths problem in an emotional way and the growth zone model gave a clear structure for doing this.

Talking about getting unstuck had a measurable impact on how over 1/3 students felt about maths. With more time and less disruption this could have been much higher.

Recommendations

1. Make 'getting unstuck' a key part of the GCSE resit classroom right from the start of the year. Normalise the language of being stuck and how it's an important part of learning new things.
2. Start the year with an exploration of getting stuck and unstuck in a safe way. This could be linked to a students' vocational area or other interest. Draw out the strategies to be used in future lessons.
3. The Growth Zone Model is an easy way to help students talk about their feelings around maths and can help teachers to get to know their groups better. It can also be used to track change over the year.
4. Talking about getting stuck and then supporting students through that process can have a positive impact on their ability to attempt and even solve problems. It's a worthwhile investment of time. Positive messages can play a vital role in changing students' mindset, if done properly
5. Students can easily switch back to a fixed mindset, thus identifying and mitigating such triggers is the key.
6. The message needs to feel genuine! - "Anyone can tell me I can do this, but do they actually mean it?"
7. Do not emphasize grades or end result, celebrate every effort and success/failure.
8. Celebrate students' mistakes and use them as a learning tool.
9. Help with building their resilience and stamina- the learning should feel natural, and free of fear, anxiety.

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