

Catherine Lees

Director of Teaching and Learning, St. Olave's School, York

Growth Mindset & Maths Setting – Mutually Incompatible?

We set in maths. We are a growth mindset school.

Some may question how these two sentences can stand side by side; surely they are impossible to reconcile? How can we claim that a child can improve if they try hard enough, while simultaneously telling them they are only 'good enough' to be in the bottom maths set? Are growth mindset and maths setting not incompatible?

Maths is a subject unlike any other in the curriculum. It speaks a language which is unlike any other. It seems mysterious and intimidating to many of us and there are grown adults whose palms start sweating when a memory of their own struggle in some distant maths classroom are brought unexpectedly to mind. I'm one of those adults myself. The power of these emotional reactions to maths can colour our perception of it and some of the worry we feel about it is probably passed onto our children.

Many schools say they have more queries and questions about maths than they do about any other subject in the curriculum. Far more than they receive about English, for example, which underpins most of the rest of the curriculum. So why is it that schools receive so many requests that a child be moved up a set?

I wonder whether it comes down to three main issues:

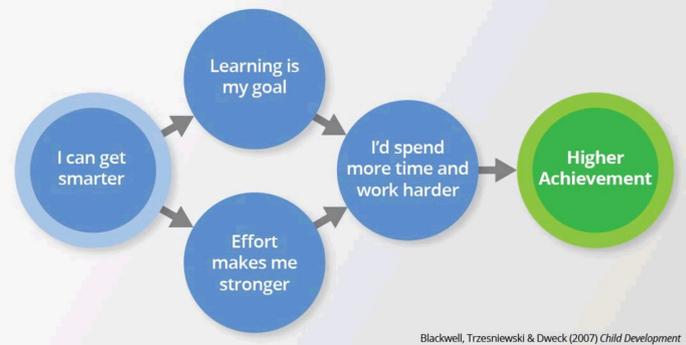
- Some pupil feels bad about being placed in a lower set and they think they will feel better about themselves in a higher set.
- Pupils compare themselves with one another and not all these comparisons are fair or kind.
- There is a perception that the higher sets will do topics the lower sets won't do.

Teachers can continue to address all of these issues in various ways at school but they need parents' help. At St Olave's our approach to these three issues is as follows:

1. Feeling bad about being placed in a lower set.

We want pupils to try and separate their ideas of success with 'doing better than others' because constantly comparing themselves with others will lead to worry, pressure and unhappiness.

A Growth Mindset Drives Motivation and Achievement



Blackwell, Trzesniewski & Dweck (2007) Child Development

Our first and most important consideration when setting in maths is how fast a child needs the pace of a lesson to be. Some pupils read the language of maths far more quickly than others. If a pupil needs a bit more time to translate this language, being in a room with a pupil who always seems to be a step ahead and is always pushing for things to go faster can be disheartening and exhausting. Some pupils work fast but inaccurately. They may need to be taught how to slow down a little to allow their brain to catch up with their pen. Some pupils feel as if the pace of a lesson is too slow but are not noticing errors in their work. They need to be taught how to find and correct these errors, which again takes time.

As children's most important role models they will take their cue about how they should feel about their set from their parent's reaction. If parents seem upset, disappointed or surprised by the maths set they have been put in, pupils may well feel that they have let them down in some way, which will sap their confidence. Feeling confident in maths lessons is vitally important; without confidence there is no risk-taking. Every hand raised to offer an answer and every sum written in their book is a risk because the pupil knows they might be wrong. A child scared of making mistakes is a child afraid to learn. This fear can be crippling. If a child senses there is no point trying hard or taking risks because judgements about their 'ability' has already been made, then they may simply stop trying.

Simply put, if parents worry about which set their child is in, their child will worry, and this may well affect their confidence and their progress.

2. Pupils compare themselves with one another and not all these comparisons are fair or kind.

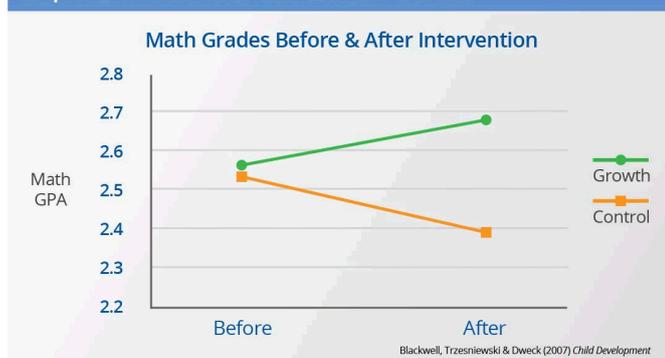
We have worked hard to remove as many ways in which pupils can compare themselves to others as possible. We do not grade work. We do not rank pupils. We do not compare pupils' work in lessons. This is because the only thing that matters to us is how much better each child is getting at something, not how many people they have out-performed.

However, we know that pupils like to seek out ways of comparing themselves; one of these ways is comparing maths sets. We always address unkind words when we hear them (or hear about them) and we hold assemblies, chapel services, PSHEE, philosophy lessons and form discussions on these topics and their repercussions but, again, we need parents' help.

Part of growth mindset is accepting that there is always going to be someone with more knowledge, or better skills than you have. That fact would make someone with a fixed mindset give up. After all, if I'm never going to be top, what's the point of trying? The flip side of this is the acknowledgement that every time I increase my skills or knowledge, by even a tiny amount, I close the gap between the me I am now and the best version of me I can be. It isn't about what they can do, it's about what I can do (and what I could do next).

Reinforcing this message at home by refusing to engage in any kind of comparison between classmates or siblings will help pupils to accept their effort is important to you, rather than their perception of their position in the cohort. Let's not forget that an average year group is not a nationally average group. An iGCSE is a nationally standardised qualification, so comparisons to others in our school are pretty meaningless in the grand scheme of things.

Impact of a Growth Mindset Intervention



3. There is a perception that the higher sets will get more done.

The bottom sets will work more slowly through the work but they will cover the same teaching points as the top sets. Those who have worked faster will cover a topic in more breadth, rather than moving onto a new topic. All pupils take the same exam at the end of the year. Some questions in the exam will be aimed at stretching those who are fluent in the language but everyone will be able to access the vast majority of the paper.

What do we want you to take from this?

A decision on a maths set is not a value judgement. It is not a criticism of previous teaching (or of your parenting). It is not an indication of how your child will do at iGCSE. It shows where, right now, your child sits as far as pace and accuracy is concerned. Those things can change, and so can sets: when we decide it's the right time, based on everything we know about your child. This is how growth mindset and maths setting can sit comfortably side by side.



Nevin Galmarini
 2017 World Cup winner
 2014 Olympic Silver Medal winner
 Professional snowboarder
 and former student of the
 HIF Sports Academy

**WE BRING YOU TO THE TOP
 SUCCESS IN SCHOOL AND SPORTS**

IB / Cambridge IGCSE / Swiss Matura / Language Year

HIGH LEVEL EDUCATION AND PROFESSIONAL SPORTS TRAINING FOR FUTURE CHAMPIONS

THE BOARDING SCHOOL & SPORTS ACADEMY OF SWITZERLAND

HOCHALPINES INSTITUT FTAN • CONTACT@HIF.CH • HIF.CH



HIF.CH