



**nace** ● **essentials**  
**guide**

Using mindset  
theory to drive  
success

**Guide 5**

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Using mindset theory to drive success

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## Introduction

I came across mindset theory in the context of my work as a wellbeing and resilience specialist. Here the aim is often to help people recognise that emotional health depends to a large extent on our perceptions and beliefs about ourselves and the world in which we live. Much of this work has focussed on developing approaches that help individuals perceive mistakes and failure as a chance to learn and grow, and to recognise that we have control over the outcome of many events in life, which often evolve in line with our actions, the decisions we make and the amount of will and effort we apply.

Mindset theory seemed to be telling a similar story, identifying a clear correlation between the beliefs learners have of themselves and their abilities, how they cope with failure, and how they perform in school. This realisation felt like a small “eureka moment,” as I then began to realise how many other learning interventions were at their core giving us a very similar message. Metacognition, formative assessment practices, Building Learning Power, Habits of Mind... I could go on. All are rooted in encouraging learners to believe, at a deep level, that they are in the driving seat when it comes to achieving success in life.

Surely, I thought, if we could encourage a growth mindset in learners, this would not only help them meet their academic potential, but would also promote their wellbeing? For more able learners in particular, this could help address some of the risks we see – such as strong negative reactions to perceived failure or criticism, or feelings of being overwhelmed by expectation and pressure. In this way, we might refer to a “learning mindset.”

I was not the first to consider this. Jessica Schleider and John Weisz, of Harvard University, tested whether a single-session growth mindset intervention could help adolescents with anxiety and depression. They found that those who developed a growth mindset showed significantly larger reductions in depression, as well as encouraging results for anxiety.<sup>1</sup>



<sup>1</sup> Schleider, J. and Weisz, J. (2017), A single-session growth mindset intervention for adolescent anxiety and depression: 9-month outcomes of a randomized trial. *Journal of Child Psychology and Psychiatry*.

## What is a mindset?

Before we look at how we can use our knowledge of mindsets to support more able learners, let's take a closer look at mindsets more generally.

Essentially, mindsets are the beliefs we have of ourselves and our abilities. They shape how we approach challenge. Based on over 35 years of work by Stanford University psychologist Dr Carol Dweck and others, the research shows that those with a growth mindset are more motivated in school and achieve better grades and higher test scores. It's important to know that mindsets are malleable, and something we can change.

We tend to refer to two contrasting types of mindset:

### Fixed mindset

Those with a fixed mindset believe that intelligence and talent are genetically predetermined, that you are born with or without a set of abilities – and that if you are not born with them, they can't be developed. Learners with a fixed mindset care a lot about how they will be judged. They may reject opportunities to learn if they think they might make mistakes. Praising for innate talent encourages the development of a fixed mindset, and of course there is a high risk of this happening with some more able learners.

### Growth mindset (or “learning mindset”)

Those with a growth mindset recognise that abilities can be cultivated with effort and determination, that talent is not preordained, and that success is linked to persistence, learning from mistakes and taking on challenges. This mindset can be cultivated by rewarding effort and encouraging learners to seek different ways of approaching tasks if success is not initially achieved.

The risk with more able learners can be that teachers do not sufficiently reward effort, due to success being perceived as a “given”. However, all learners need “process praise” to build or reinforce that all-important growth mindset.

The diagram below shows attitudes commonly associated with these two mindsets.



## More able learners and growth mindset

For more able learners the notion that effort and persistence are just as important as talent when it comes to achieving pretty much anything in life can come as a surprise. This is particularly likely if they have achieved success with relative ease, and/or been told that they have a special gift. Whether in art, mathematics, English, music or Irish dancing, being singled out by others as having a “genetic aptitude” can mean learners believe their ability is impossible for the average person to acquire. They are made to feel special. Valued. Important.

However, what might the perception of that “talent” be for those with a fixed mindset when things get more difficult, requiring greater effort and determination to succeed? What happens when the competition gets harder or mistakes are made? When questions need to be asked to seek a better depth of understanding?

In these instances, there is a risk that learners who have previously been praised and rewarded for being talented feel that their gift is slipping away. Their self-image is challenged. They feel less special.

This can lead to a number of problems. They might tell themselves and others that the activity is “boring” or a “waste of time,” and withdraw in order to save face. They might try to cheat, become aggressive, act the class clown, hide their mistakes, or blame others for their lack of success. In many cases the outcome is a withdrawal from the learning process.

Mindset theory helps us understand why this can happen and what we can do to stop it, which presents an exciting opportunity to try to ensure that more able learners achieve well academically, but also emotionally.

The following pages suggest actions schools can take at both strategic and classroom levels, to develop a culture that builds growth mindsets.

More able learner with a fixed mindset	More able learner with a growth mindset
Will want to see quick wins, easy success, will seek out less able competition	Will actively seek challenge, smart friends, opportunities to learn
Focus on performance, rather than effort needed to achieve	Focus on learning
If they feel they have failed or have to make effort, may take this as a sign of low ability	Not threatened by hard work or failure, doesn't see this as reflection of ability
May not recover well from setbacks, may be flustered, full of self-doubt, at risk of walking away	Seeks new challenges for a sense of achievement, picks self up if fails
<b>Self-protection focus:</b> <ul style="list-style-type: none"> <li>● Selection of easy activities</li> <li>● Avoidance of tasks (passive/active)</li> <li>● Social comparison – may put others down to feel better about self</li> <li>● Deny value</li> <li>● May cheat/lie</li> </ul>	Mistakes perceived positively, as they support the learning process
	Effort and persistence viewed as necessary part of success
<b>Helplessness orientation</b>	<b>Mastery orientation</b>

**Source:** Adapted from Hoskins, S. L., Growth Mindset in the UK: Warts and All, South of England Principal Educational Psychologists' Annual Professionals Meeting, From BESD to SEMH: Child Development and Social and Emotional Wellbeing (March 2017). For more research in this area, visit [www.port.ac.uk/departments-of-psychology/community-collaboration/growing-learners/](http://www.port.ac.uk/departments-of-psychology/community-collaboration/growing-learners/)

## Strategic actions

### 1. Adopt a whole-school approach

Embedding a learning mindset culture needs to be recognised as a deliberate and intentional act that requires constant attention to be maintained. “Mindsets” need to become part of the institutional language. Everyone needs to be involved, including parents, support and pastoral staff, as well as teachers.

To achieve this in your school, you will need:

- Visible and explicit support from the most senior staff in the school, who communicate their vision to learners and staff members, provide the support necessary to implement the actions needed, have high expectations, and involve parents;
- A strong evidence base to demonstrate how it can be done, and why, which is shared with all stakeholders;
- To include every member of staff, from the classroom to the playground, in training and development activities to ensure all understand how to praise effort and process in the right way, and feel excited and inspired to do so;
- Enthusiastic teachers willing to embrace and apply practice and share their actions and results with others, and who can act as growth mindset champions.

### 2. Invest in staff development

All staff should take part in learning mindset training that helps them understand and enthusiastically apply this knowledge so they are able to avoid inadvertently encouraging learners to build fixed mindsets, and actively seek opportunities to build growth mindsets. Training, supervision, coaching and practice groups should provide space and opportunities to reflect, affirm and connect staff, and to consider activity based on individual roles, responsibilities and curriculum areas. This does not need to be confined to teaching staff. For example, lunchtimes can be an opportunity to encourage perseverance when learning how to use cutlery.

Staff development should also address a worrying trend picked up by Dr Dweck: staff members know that admitting to having a fixed mindset is “bad,” and therefore deny thinking in this way. We all have a combination of fixed and growth mindset in us. Professional development programmes can help staff feel comfortable recognising this, and learn how to tune into those triggers that make them fall into the fixed mindset way of thinking, so they can be addressed.



## Classroom actions

### 1. Help learners understand fixed and growth mindsets

Teach learners about their brain, and that attainment owes much to effort:

- The brain is like a muscle. The more we use it, the stronger it becomes.<sup>2</sup>
- We are not born as clever, stupid or average as some might think.
- Learning involves laying insulation around neurons in linked neural circuits, which increases signal strength, speed and accuracy.
- We can choose to develop a growth mindset. Mindsets are beliefs and we have the power to change these.

Activities could include:

- Reflecting on how learners developed skills such as learning to swim, play a sport, ride a bike, cook, apply make-up... Focus on the process – what they did and how it felt. Rarely was it easy from the start.
- Setting a task to learn a new skill over time, and report back on reflections – from juggling to designing a webpage. The more we deliberately practise something, the better we become. Learners could draw on existing skills to help coach each other.

- Asking learners to consider the question, “Who has achieved something very important because they were intelligent and didn’t need to work hard?” The answer, they might interested to discover, will be no one.
- Researching individuals they admire who have achieved something great, and exploring what these people have in common. This time the answer is usually along the lines of effort, determination, persistence and strong desire.
- Creating a wall of inspiring figures, including photos, quotes and “change words” (see page 6).
- Considering what life might be like for someone with a growth mindset, and at the same time, for someone with a fixed mindset. Start from the very beginning of their respective lives. Develop a timeline... how might they behave differently when facing challenge and difficulty at each stage?
- Roleplaying challenging situations with characters taking on a growth and then a fixed mindset, and seeing how the behaviours differ. This might explore how those with a fixed mindset may choose unhelpful coping mechanisms such as drug and alcohol abuse, when faced with adversity. Those with a growth mindset tend to see problems as issues that can be solved, so are less likely to adopt these unhelpful coping strategies.

- Telling them the story about the gardener and chrysalis. The gardener was so keen to help the butterfly emerge when watching it struggle to do so day after day, he picked at the casing to free it. Of course, this resulted in too-weak wings, rendering the creature unable to fly. This introduces the idea of challenge sometimes being a necessary part of life.



<sup>2</sup> Doidge, N. (2007). The Brain That Changes Itself: Stories of Personal Triumph from the Frontiers of Brain Science. New York: Viking.

## Change your words... Change your mindset!



## 2. Encourage learners to embrace challenge and make mistakes

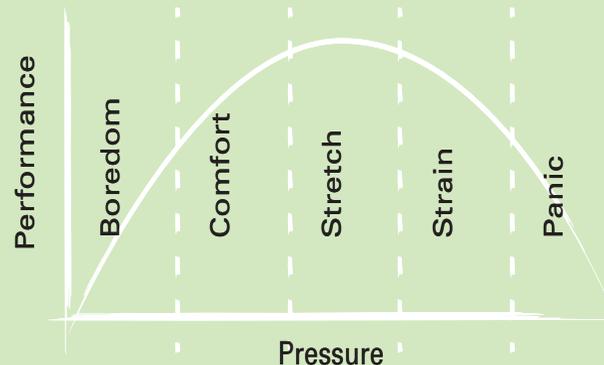
Teach learners the value of seeking challenge and not always getting things right:

- Challenge provides a learning opportunity, the chance to extend skills and knowledge beyond existing levels.
- You are going to actively encourage learners to make mistakes, and will foster a safe and secure environment in which this is accepted with no criticism or humiliation.
- Mistakes will be framed as evidence of learning and of getting better at something.
- You have high expectations of them; this will impact greatly on their learning, achievement, self-belief and willingness to take on challenge.

Activities could include:

- Reflecting on the chrysalis metaphor which teaches the importance of struggle. Ask learners to note down what this story taught them, and share their thoughts with the class.
- Sharing research carried out by Jason Moser and his colleagues, who discovered that when encountering a mistake, a brain with a growth mindset experiences more electrical activity as it works hard to spot, understand and correct mistakes. In contrast, the fixed mindset brain tunes out correcting feedback and actually closes down neural activity.<sup>3</sup>

- Showing the Yerkes-Dodson performance curve (see diagram below). This can help show how we perform at our best when in stretch. In addition, if we continually apply effort in the stretch zone, our comfort zone grows... What we previously experienced as stretch settles into our comfort zone. Time for a new challenge!



- Reflecting on times when learners have stayed too long cruising, and reminding them to nudge themselves to move outside of their comfort zone when finding a task too easy. Rehearse this. Imagine they are already adopting this behaviour. What is the situation and what do they notice happening? What do others notice?
- Helping learners frame the stretch zone as “exciting AND challenging” not “exciting BUT challenging.” As psychologist Kelly McGonigal puts this in her TED talk, seeing those times when we are feeling pressured and are struggling as “the biology of courage,” and viewing pressure as our friend rather

than our foe.<sup>4</sup> Those with a fixed mindset may avoid putting themselves in the stretch zone for fear of failure. Learning that this is how we achieve more, and accepting that failure is part of life, can be important revelations.

- Exploring different perceptions of stretch. Place three large concentric circles on the floor, or three pieces of paper around a room: one saying “comfort,” another “stretch” and another “panic.” Read out a list of activities and ask learners to go to the part of the room that aligns most closely with their zone. For example, riding a horse, karaoke, learning to drive, algebra... This helps teach learners that we are not all the same. One person’s comfort zone is another’s panic zone, and it is ok to be in that panic zone on some occasions. We all are. It’s how we deal with this that matters.
- Encouraging the perception of mistakes as learning experiences. Role model how powerful this can be by sharing examples from your own life. Ask learners to explore the lives of people who have made mistakes and succeeded, including people in their own lives as well as famous figures.

<sup>3</sup> Moser, J. S., Schroder, H. S., Heeter, C., Moran, T. P. and Lee, Y. (2011). Mind your errors: evidence for a neural mechanism linking growth mindset to adaptive post-error adjustments. *Psychological Science*, 22(12), 1484-9.

<sup>4</sup> [https://www.ted.com/talks/kelly\\_mcgonigal\\_how\\_to\\_make\\_stress\\_your\\_friend](https://www.ted.com/talks/kelly_mcgonigal_how_to_make_stress_your_friend)

### 3. Help learners regulate emotions

Teach learners how to cope with emotions:

- More able learners with a fixed mindset can experience a strong emotional response when they:
  - See that what they and others might have seen as a “gift” is falling away;
  - Feel their self-image being challenged;
  - Start to struggle to understand something.
- Explore what happens in the brain when those with a fixed mindset are faced with failure and the biology of why this happens.
- It is possible to cope with the difficult emotions around failure by understanding why they happen and using practical tools to reduce those strong feelings.

Activities could include:

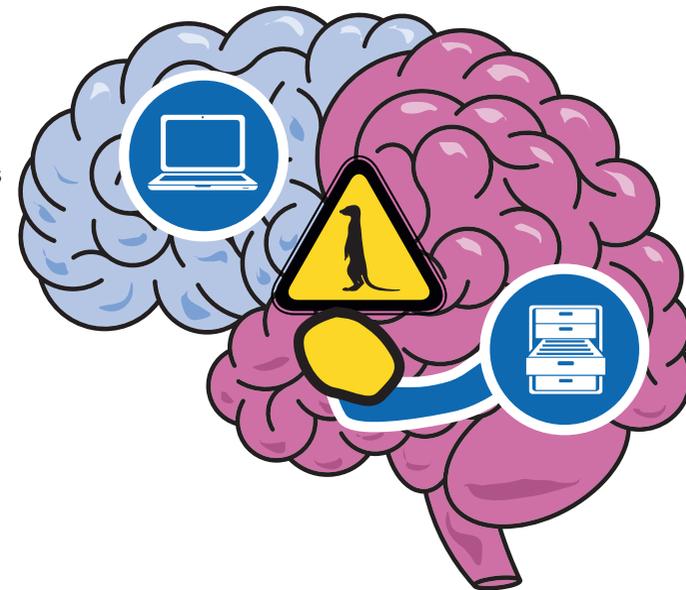
- Conducting a high-pressure task, such as making a house of cards in a competitive context, while increasing heart rate by playing a fast song or popping a balloon. Reflect on times when they have felt overwhelming pressure, such as entering an exam hall, asking someone out, or taking a penalty kick.
- Encouraging group discussion of these experiences, including emotions, thoughts, behaviour and physical sensations. These can be recorded on a sheet of paper showing an outline of a human body, or on mini whiteboards. Perhaps the stomach felt like a

washing machine, or the heart felt as though it was jumping out of the chest. These are clues even the youngest learners can tune into.

- Showing the image below and explaining how the yellow oval, the amygdala, is constantly checking where danger might lie to keep us alive – and how it can easily perceive failure or making a mistake in the same way as real physical danger. You can make models to reinforce this with playdough, balloons, even vegetables! The meerkat image above the amygdala shows that there is no checking of the likelihood of danger, in much the same way as a meerkat on watch doesn't turn to a threatening sound, but simply takes action. It is this misinterpretation of failure as danger that causes the series of the emotions, thoughts, behaviours and physical sensations they have identified in the earlier exercise.
- Informing learners that when this happens, our ability to think straight becomes difficult, as much of the functioning of the neocortex, the “computer,” is reduced. Memory, the hippocampus “filing cabinet,” also suffers, as we are unable to store or retrieve memory once the amygdala has hijacked the brain, wiring it for fight, flight or freeze.

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- Learning how to stop this by simply taking a breath in for a count of 7 and out for 11, to reduce the sensation of being under threat. This is a great way of shifting the physiology of the brain so we can use it in a more helpful way. This can also be achieved through exercise, learning to shift attention away from the stressor through distraction, and visualising techniques. Practise and rehearse these in class.



### 4. Understand the importance of effort and the process of learning

Teach learners the value of effort and the process of learning:

- Effort has status.
- You value their persistence, focus, determination, and the strategies they apply.
- You will not praise every small effort, or tell them they can do anything they want to; building a growth mindset is about having accurate beliefs about oneself and what is possible. Empty praise can paradoxically do more harm than good.
- Help learners recognise when a strategy is not working and that it is time to explore others. This quote from comedian W.C. Fields is quite an interesting one!

“If at first you don’t succeed, try and try again. Then quit. No use in being a damn fool about it.” –W. C. Fields.

Activities could include:

- Identifying new challenges that go beyond learners’ current level of achievement, and making sure you are providing a safe, supportive and reflective environment in which not getting it right is welcomed, allowing learners to continually refine their work through repetition.

- Making sure feedback is based on information that is orientated towards the future and not the past. “Next time try...” or “what if you...” rather than “weak answer”; or “you could do better”.
- Using formative feedback so learners receive accurate feedback on their strengths and areas for development. Dr Dweck’s research found that those with a fixed mindset found it incredibly difficult to assess their performance and ability, while those with a growth mindset were very accurate. Set time aside for learners to absorb feedback and decide how to act on it, redrafting and then resubmitting work for further comment.
- Making sure the activity of thinking hard is made explicit. Provide space for the whole class to think for a few seconds longer than the one learner who has worked out the right answer. Don’t rush them. Then ask them what they are thinking.
- Encouraging peer feedback – learners assessing each other’s work, reflecting on the questions: “How could this work be improved?” “What evidence is there that effort has gone into this work?”
- Breaking effort down into the different elements involved in the process of undertaking a challenge, such as persistence, determination, seeking challenge and strategy. Then deciding how to reward those behaviours, for example using post-it notes of different colours linked to each, which can be placed directly onto learners’ work (see page 10).
- Segmenting activity into research, planning, writing, reviewing, re-drafting, responding to feedback. These stages can then be rewarded, rather than simply the outcome.
- Finding the right feedback for the situation. For the more able learner who is finding things easy you might want to say something like: “That seemed quite easy for you. How about we find something challenging that you can really learn from?” At that crucial point of finding things difficult where there is a risk of disengagement: “Great. The struggle of learning. Let’s work together to figure out what you don’t understand and what you can do to master this topic.” If they are clearly putting in the effort but still not understanding, you could try: “I really like your perseverance; you will get there. What else could you try, or could we work on together, to understand it better?”
- Reminding them that FAIL can often mean First Attempt in Learning! Ask learners to share times when they have failed and learned. This helps them understand that mistakes do not define them. They are something we learn from. Model this behaviour yourself by publicly making mistakes and showing what you have learned from them.

Working independently	Effort and focus	Behaviour and focus	Work completed	Helping others
Supporting the team	Leading the team	Staying focused when could have been distracted	Being motivated to work hard	Asking great questions
Checking over work	Reflecting on how improvements could be made	Making positive use of advice and suggestions	Learning from mistakes	Great problem solving
Explanation of thinking	Evidence and research gathering	Other opinions considered	Great listening	Well-considered answer
Great planning	Initiative taken well	Very creative	Great solution	Good use of sources
Excellent questions	Excellent quality of work	Perserverance	Getting involved	Excellent effort
Staying on task	Good organisation	Great attention to detail	?	?

Violet: Responsibility

Green: Reflection

Blue: Careful thinking

Red: Resourcefulness

Yellow: Determination

## A final note

The foundation of building growth mindsets is the ability to excite and inspire learners so they want to learn. In his book *Outliers*, Malcolm Gladwell notes that we may have some innate predisposition to be “good” at something, but he argues that what really sets people apart is the application of effort to capitalise on this, and how that the level of effort is driven by desire.<sup>5</sup>

For growth mindsets to have real impact, it is important to energise learners to focus on the process of learning – not just memorisation and test-taking, but on deeper, joyful learning. If learners are motivated to learn and know that they can, but also know that there might be some storms ahead, remind them that a smooth sea never made a skilled sailor. While there may be bumps along the way, in recognising the value and being able to cope with these challenges they will be better prepared for success not just at school, but in the rest of their lives.



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<sup>5</sup> Gladwell, M. (2008), *Outliers: The Story of Success*.  
New York: Little, Brown and Co



## Case study author

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National Association for Able Children in Education

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