Mindset, Examined

What the Research Says About Growth Mindset, and What It Does Not

by Cara Sinclair

2026 Edition | Free chapters 1 to 3

Chapter 1: What a Growth Mindset Is

The phrase "growth mindset" is everywhere, and it is often used loosely. This chapter pins down what researchers mean by it, so the rest of the book can look at the evidence for that specific idea.

THE DEFINITION

Researchers describe a growth mindset as the belief that intellectual ability can be developed (Yeager and Dweck, 2020, American Psychologist). A broader description in another paper says it is the belief that human capacities are not fixed but can be developed over time, and that mindset research examines the power of such beliefs to influence human behaviour (Dweck and Yeager, 2019, Perspectives on Psychological Science). The opposite belief is a fixed mindset, the view that such abilities are set. In older research the terms were incremental and entity theories, and later chapters use both sets of words.

TWO ERAS OF RESEARCH

The 2019 paper is written by two researchers from different generations, and it traces how the field changed. The first author describes early work on how mindsets affect challenge seeking and resilience, and then how they influence the formation of judgments and stereotypes. The second author describes the more recent turn to field experiments and replication science, and the effort to create reliable interventions to address underachievement, including a national experiment in the United States. The authors conclude that there is much more to learn.

WHY THE DEFINITION MATTERS

Three things follow from the definition. First, a growth mindset is a belief, not a personality or a level of effort. Second, the belief is about whether abilities can be developed, not about whether everyone can be good at everything. Third, whether having the belief changes results is an empirical question. The chapters ahead take it as one, looking at what studies of different sizes found.

COMMON MISUSES

These are our observations, not claims from the papers.

Treating it as a slogan. Telling someone to "have a growth mindset" is not the same as the belief the research studies.

Treating it as praise for effort. The definition is about the belief that ability can be developed, not about how hard someone tries.

Treating it as a cure. The later chapters show effects that vary widely from setting to setting.

A WORKED EXAMPLE (INVENTED FOR PRACTICE)

Two colleagues struggle with a new software tool. One thinks, "I am not a tech person." The other thinks, "I have not learned this yet." The second thought matches the definition: ability can be developed. It does not promise they will master the tool, only that the belief points toward learning.

PRACTICE EXERCISE

Write down one skill you have said "I am not good at." Rewrite the sentence so that it is about what you have not learned yet. Notice whether it changes what you would try first.

KEY POINTS

A growth mindset is the belief that abilities can be developed. The field has moved from early work on challenge seeking and resilience to field experiments and replication. The definition is a belief, and whether it changes outcomes is a question for evidence, which the next chapters examine.

Chapter 2: Mindsets and Self-Regulation

Before asking whether a mindset can be changed and whether changing it helps, it is worth asking what mindsets are linked to. A large meta-analysis did that for how people pursue goals.

WHAT 113 SAMPLES SHOWED

A meta-analysis of the link between implicit theories (mindsets) and self-regulation covered a total of 28,217 unique participants across 113 samples. The samples spanned diverse achievement areas, 68 percent of them academic, and ages from 5 to 42, from 10 different nationalities, with 58 percent from the United States. The authors framed self-regulation as three processes: goal setting, goal operating and goal monitoring. They found that implicit theories predicted these processes, which in turn predicted goal achievement (Burnette, O'Boyle, VanEpps, Pollack and Finkel, 2013, Psychological Bulletin).

THE NUMBERS

Incremental theories, the belief that human attributes can be changed, as opposed to entity theories, the belief that they are fixed, significantly predicted several things. For goal setting, they went with fewer performance goals (r = -.151) and more learning goals (r = .187). For goal operating, they went with fewer helpless-oriented strategies (r = -.238) and more mastery-oriented strategies (r = .227). For goal monitoring, they went with fewer negative emotions (r = -.233) and higher expectations (r = .157). The effects for goal setting and goal operating were stronger when there was an ego threat such as failure feedback.

WHAT TO TAKE FROM THIS

These are links, not proof of cause. The meta-analysis shows that people who hold an incremental view tend to set learning goals, use mastery strategies and feel fewer negative emotions about setbacks. The sizes are small to modest: correlations around .15 to .24. And the effect is strongest when things go badly, as with failure feedback, which is where the idea would be expected to matter.

A note on terms. A performance goal is aimed at looking able, and a learning goal at improving. A helpless-oriented strategy is giving up or avoiding when stuck, and a mastery-oriented strategy is persisting and trying new methods. The meta-

analysis defines them within its own framework; the plain-word versions here are ours.

HABITS TO TRY

These are practical suggestions, not findings from the meta-analysis.

Set one learning goal alongside any performance goal. "Learn how to run the analysis myself" next to "deliver the report on time."

Plan for setbacks. Decide in advance what you will do if the first attempt goes badly, so a failure is a step in the plan.

Watch your self-talk after feedback. Notice whether it is about ability ("I am bad at this") or about the next step ("what would I try next?").

Track mastery moves. When stuck, write the strategies you tried. Trying a new one is the mastery move.

A WORKED EXAMPLE (INVENTED FOR PRACTICE)

You get critical feedback on a presentation. You notice the thought, "I am just not a good speaker." You restate it as a learning goal: "Next time I will open with the main point and practise the first minute aloud." You have turned a threat into a plan, which is the kind of move the research links to incremental views.

PRACTICE EXERCISE

For a task this week, write one performance goal and one learning goal. When you hit a snag, write what you tried and what you will try next.

KEY POINTS

Across 113 samples and 28,217 participants, incremental views went with learning goals, mastery strategies, fewer negative emotions and higher expectations, with small to modest correlations, and the effects were stronger under ego threat such as failure feedback. These are associations, not proof of cause.

Chapter 3: A National Experiment

Correlations show what goes together. To see whether changing a mindset changes results, researchers need experiments. This chapter looks at the largest one.

WHAT THE EXPERIMENT DID

A study published in Nature tested a short, online growth mindset intervention that teaches that intellectual abilities can be developed. It took less than one hour. The sample was nationally representative, drawn from students in secondary education in the United States. The authors state that this was the first such intervention evaluated in a population-generalisable sample (Yeager, Hanselman, Walton, Murray, Crosnoe and colleagues, 2019, Nature).

WHAT IT FOUND

The intervention improved grades among lower-achieving students and increased overall enrolment in advanced mathematics courses. The study also identified school contexts that sustained the effect: the intervention changed grades when peer norms aligned with the messages of the intervention.

HOW THE AUTHORS BUILT CONFIDENCE

The abstract lists safeguards. Data collection and processing were independent, the analyses were pre-registered, and a blinded Bayesian analysis corroborated the results. The abstract does not say why these steps were taken. This field has been the subject of public debate, which Chapter 5 covers.

WHAT TO TAKE FROM THIS

Three points stand out. First, a short intervention changed outcomes for one group, the lower-achieving students, not for everyone. Second, the effect depended on context: it held where peers supported the message. Third, the study was designed for credibility, with pre-registration and independent data handling.

The abstract does not give the size of the grade change, and we do not invent one. Chapter 4 reports pooled effect sizes from a meta-analysis.

WHAT IT DOES NOT SHOW

This was a study of secondary-school students in the United States, and the intervention was a specific one-hour programme. It does not show that reading about growth mindset, or telling a colleague to adopt one, will change their results.

HABITS TO TRY

These are practical suggestions, not findings from the experiment.

Look for the context. If you want to encourage a learning attitude, notice whether the people around you reinforce it.

Aim for specific groups. The effect was found for lower-achieving students, so target help where it is most needed.

Check your own evidence. If you try a mindset approach with your team or class, plan how you will measure it before you start.

A WORKED EXAMPLE (INVENTED FOR PRACTICE)

A teacher wants to introduce a mindset lesson. Before starting, she writes how she will measure it: quiz scores, advanced-course sign-ups and student comments. She also notes that her class has a culture where mistakes are mocked. She decides to deal with that first, because the study found effects where peer norms matched the message.

PRACTICE EXERCISE

Think of a group you belong to. Write down one norm that supports learning from mistakes and one that undermines it. Decide on one small change to strengthen the first.

KEY POINTS

A one-hour online intervention in a nationally representative US sample improved grades among lower-achieving students and increased enrolment in advanced mathematics, and it worked where peer norms matched its message. The study used independent data handling, pre-registration and a blinded Bayesian check. It does not show effects for everyone or for other settings.

Get the full book

This free preview holds the first 3 of 7 chapters. The full book is at ebookdev.com/mindset-examined.