

Raising Student Achievement By Promoting a Growth Mindset





Overview

- ***Fixed*** versus ***Growth*** mindset
- Research on how **beliefs** shape learning
- How to change mindsets
 - 5-session PD invitation



People with a Fixed Mindset believe:

I was born
this way

I'm a natural
communicator

I'm a natural
at math

Leaders are
born, not made

- Nature over nurture
- Each person inherits fixed intelligence, talents, and personality traits
- Intelligence, talents, and personality traits stay relatively stable throughout their lives
- Strengths and weaknesses are part of who they are as a person

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People with a Growth Mindset believe:

Leaders are
made, not born

I can do it if I put
my mind to it.

She worked hard
to get where she
is today.

- Nurture over nature
- Intelligence, talents, and personality characteristics are largely learned and can change over time with effort and practice
- Effort, careful planning, and ongoing learning predict people's ability to achieve success

What Motivates Students to Try Hard in School?



Some students are highly motivated and others are not.

Why?



Growth Mindset and Achievement

- Decades of research show a powerful relationship between **mindset** and **achievement**.
- Students' **beliefs** about intelligence and learning impact:
 - Motivation
 - Academic behaviors (e.g., studying and seeking help)
 - Responses to challenges and setbacks
 - Academic achievement



Growth Mindset vs. Fixed Mindset

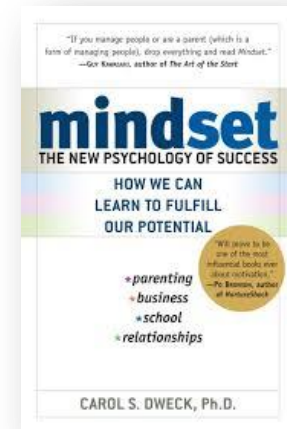


Fixed mindset

Intelligence is a fixed trait. You can't change it.

Growth mindset

You can grow your intelligence through effort.





Consequences of Beliefs

| | Fixed Mindset | Growth Mindset |
|----------------------|---------------|----------------|
| Goal in School? | | |
| Values effort? | | |
| Reaction to Failure? | | |



Consequences of Beliefs

| | Fixed Mindset | Growth Mindset |
|----------------------|---------------|----------------|
| Goal in School? | Look Smart | Learn |
| Values effort? | | |
| Reaction to Failure? | | |



Goals

| | Fixed mindset | Growth mindset |
|----------------------|---------------|----------------|
| Goals? | Look Smart | Learn |
| Values effort? | | |
| Reaction to Failure? | | |

Looking smart is most important:

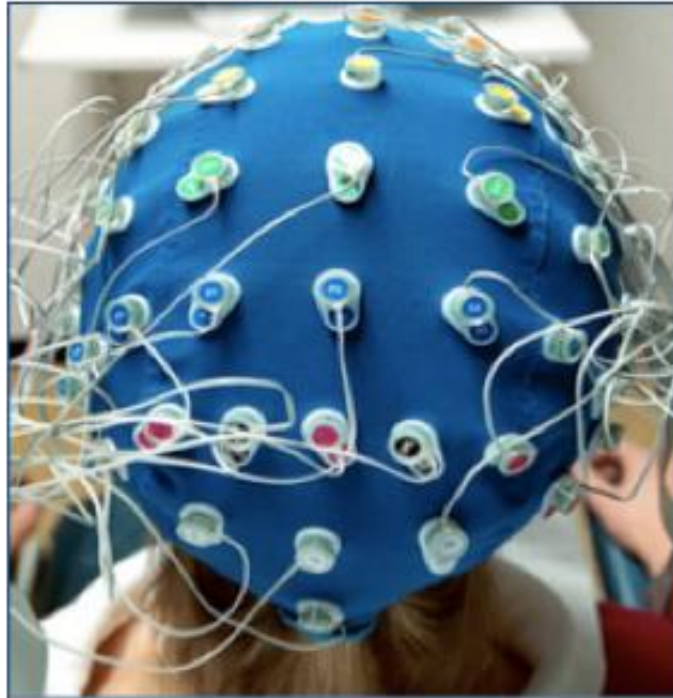
“The main thing I want when I do my school work is to show how good I am at it.”

Learning is most important:

“It’s much more important for me to learn things in my classes than it is to get the best grades.”



ERP Evidence for How Mindsets Control Attention



Mangels, Butterfield, Lamb, Good, & Dweck, 2006



Consequences of Beliefs

| | Fixed Mindset | Growth Mindset |
|----------------------|---------------|----------------|
| Goal in School? | Look Smart | Learn |
| Values effort? | No | Yes |
| Reaction to Failure? | | |



Value of Effort

| | Fixed mindset | Growth mindset |
|----------------------|---------------|----------------|
| Goals? | Look Smart | Learn |
| Values effort? | No | Yes |
| Reaction to Failure? | | |

Effort is **negative**:

“To tell the truth, when I work hard at my school work it makes me feel like I’m not very smart.”

Effort is **positive**:

“The harder you work at something, the better you’ll be at it.”



Consequences of Beliefs

| | Fixed Mindset | Growth Mindset |
|----------------------|---------------|----------------|
| Goal in School? | Look Smart | Learn |
| Values effort? | No | Yes |
| Reaction to Failure? | Give Up | Work Harder |



Response to Failure

Helpless

“I would spend less time on this subject from now on.”

“I would try not to take this subject ever again.”

“I would try to cheat on the next test.”

| | Fixed mindset | Growth mindset |
|----------------------|---------------|----------------|
| Goals? | Look Smart | Learn |
| Values effort? | No | Yes |
| Reaction to Failure? | Give up | Work Harder |

Resilient

“I would work harder in this class from now on.”

“I would spend more time studying for the tests.”



Consequences of Mindsets

| | Fixed Mindset | Growth Mindset |
|----------------------|---------------|----------------|
| Goal in School? | Look Smart | Learn |
| Values effort? | No | Yes |
| Reaction to Failure? | Give Up | Work Harder |
| Achievement | Lower | Higher |



Does Growth Mindset Correlate with Achievement?

Evidence From A Nationwide Sample In Chile



Susana
Claro



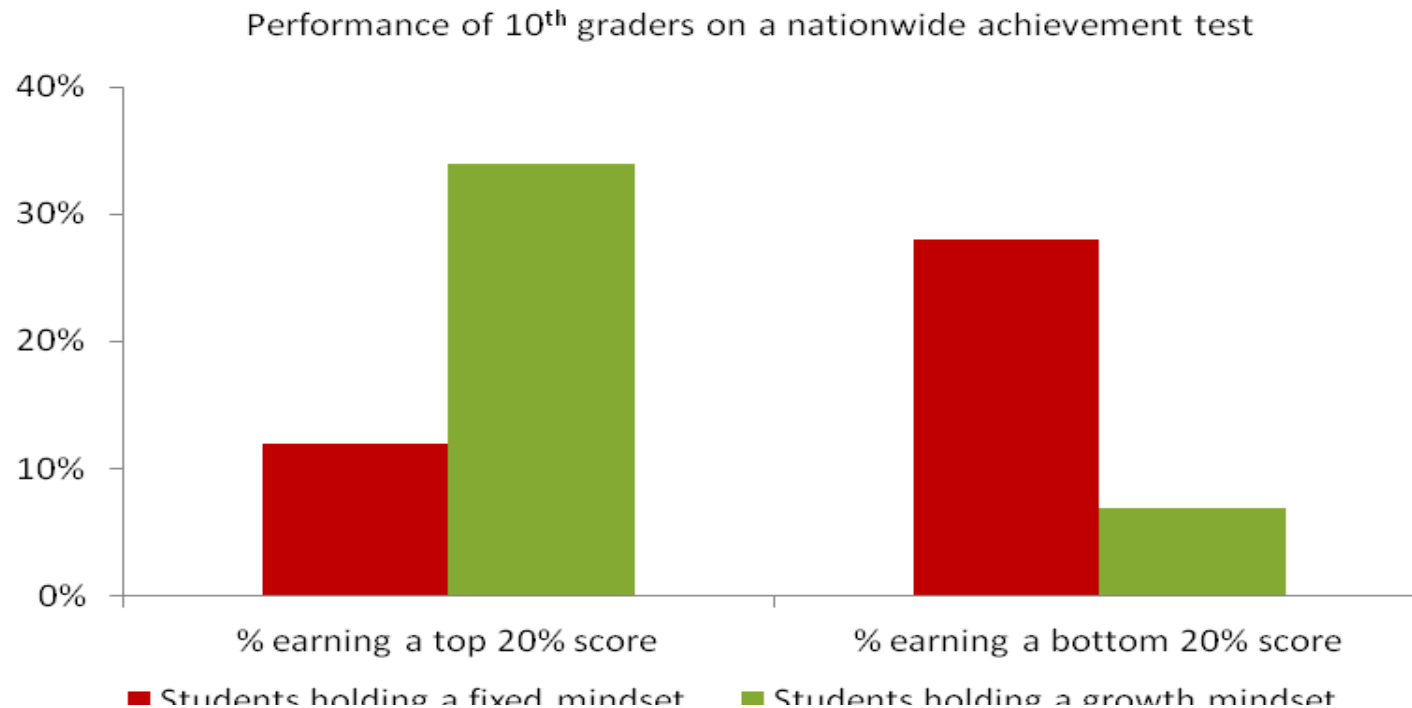
Dave
Paunesku

- Chilean National Achievement Test
- 10th grade test incorporated Growth Mindset Assessment
- **n=147,000**

Does Growth Mindset Correlate with Achievement?



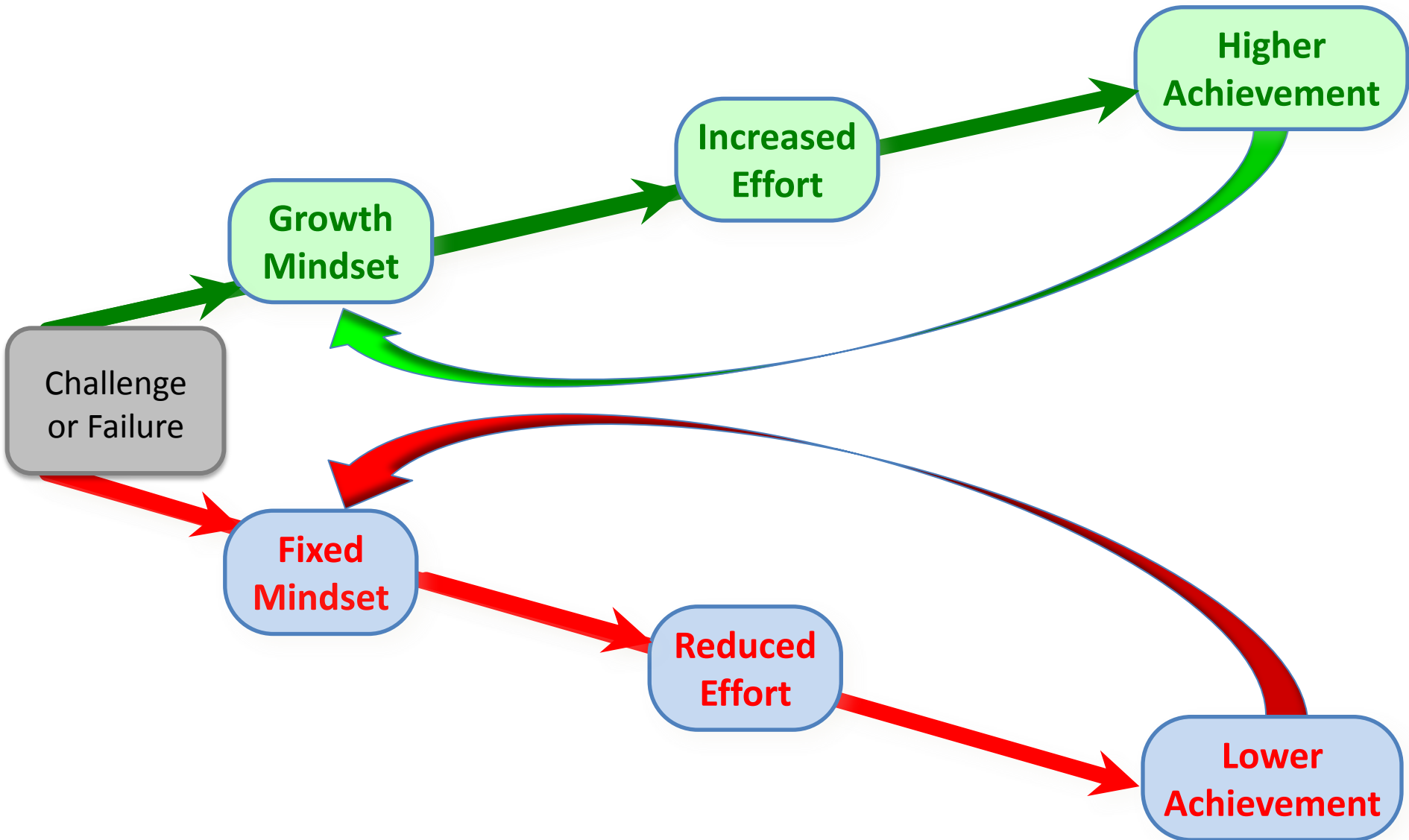
Evidence from a Nationwide Sample in Chile



top 20% on a nationwide achievement test



Recursive Processes





Mindsets Can Change!

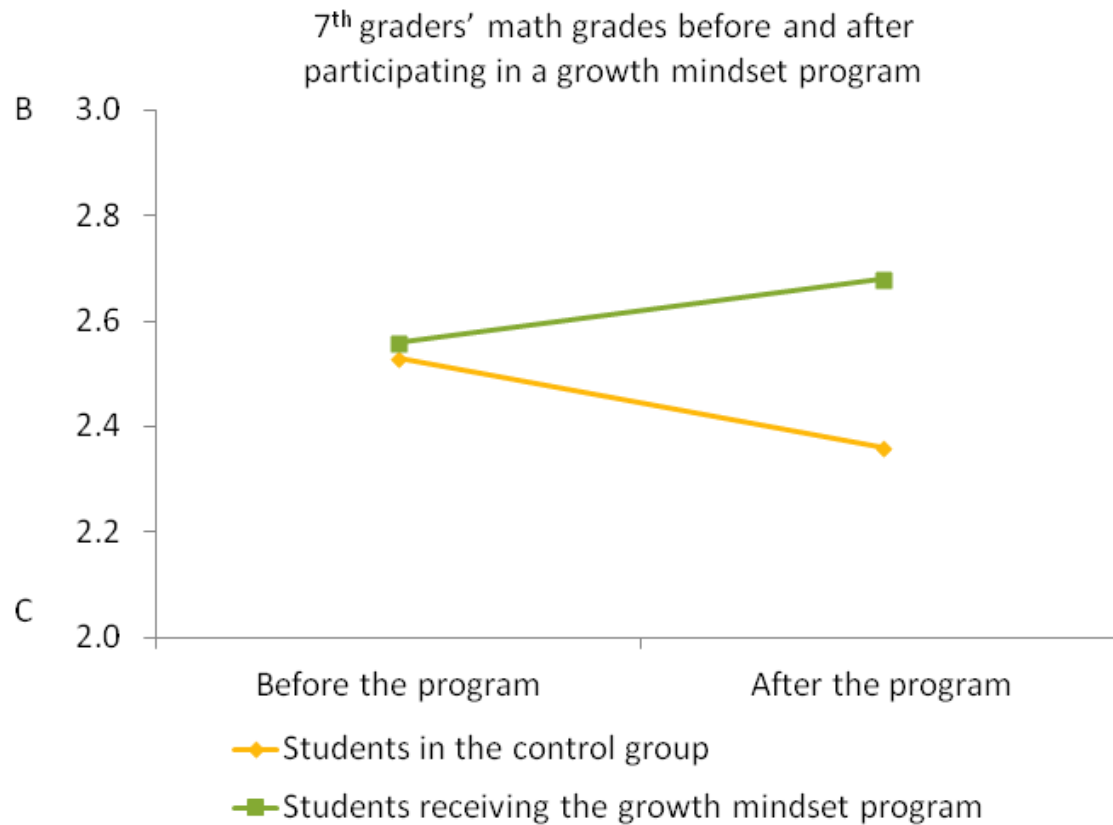
Rigorous research also shows that mindsets can change

When they are changed to have a Growth Mindset, **students do better**



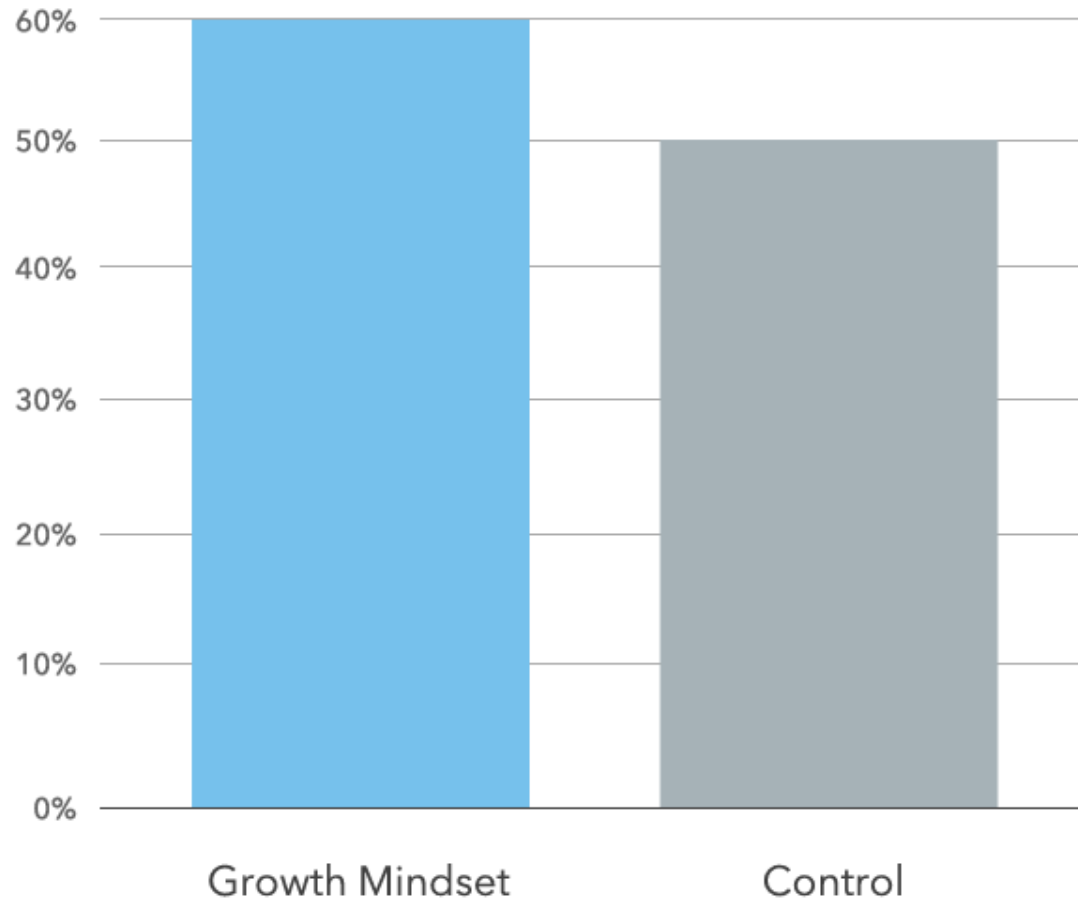


Mindset Interventions



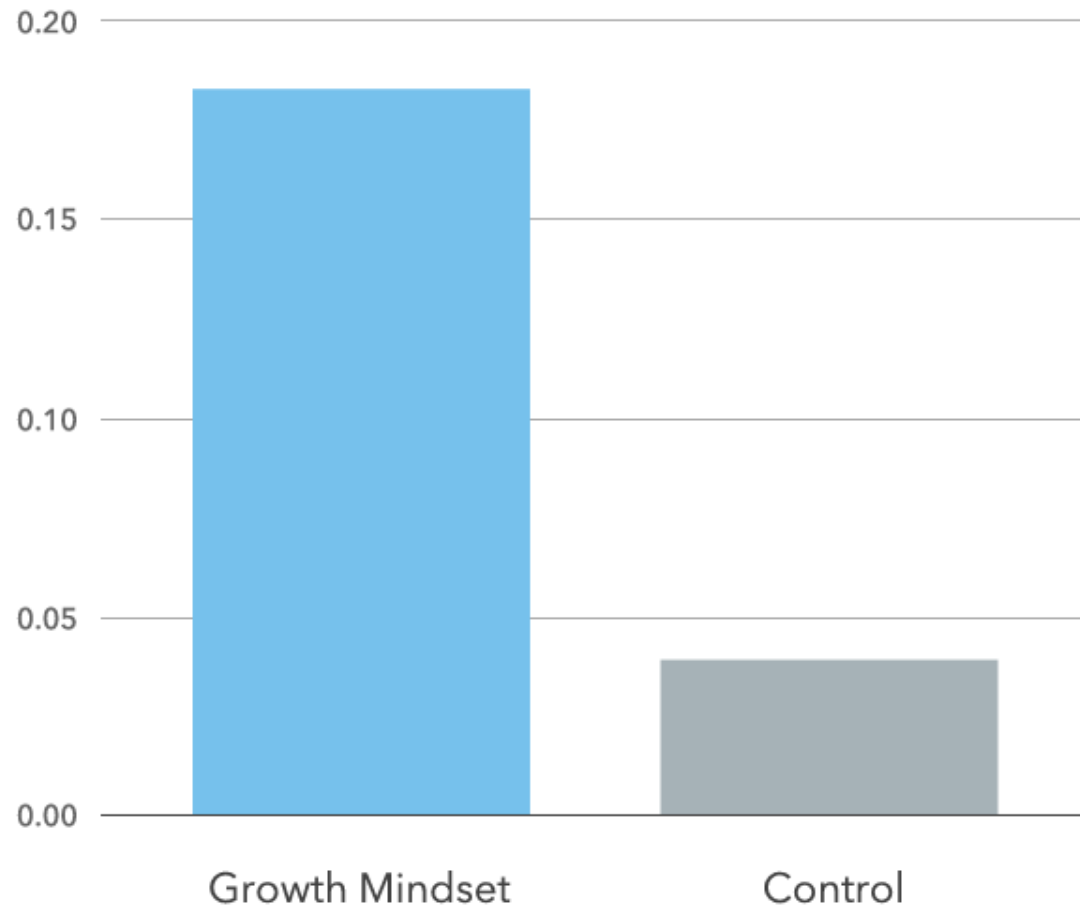


Percent of Courses Passed by Underperforming High School Students





Underperforming High School Students Change in GPA





How Do Everyday Interactions Shape Mindsets?

- The **language** we use tells others what we believe and what we value
- **Feedback** tells us what is expected of us and what goals we should have



Praise

- Research Question:

Do different kinds of praise influence students' response to failure?



Claudia Mueller



Praise Effects on IQ Test Performance:

- **Control Group:** “Wow, that’s a really good score.”
- **Intelligence Praise:** “Wow, that’s a really good score. You must be smart at this.”
- **Effort (Process) Praise:** “Wow, that’s a really good score. You must have tried really hard.”

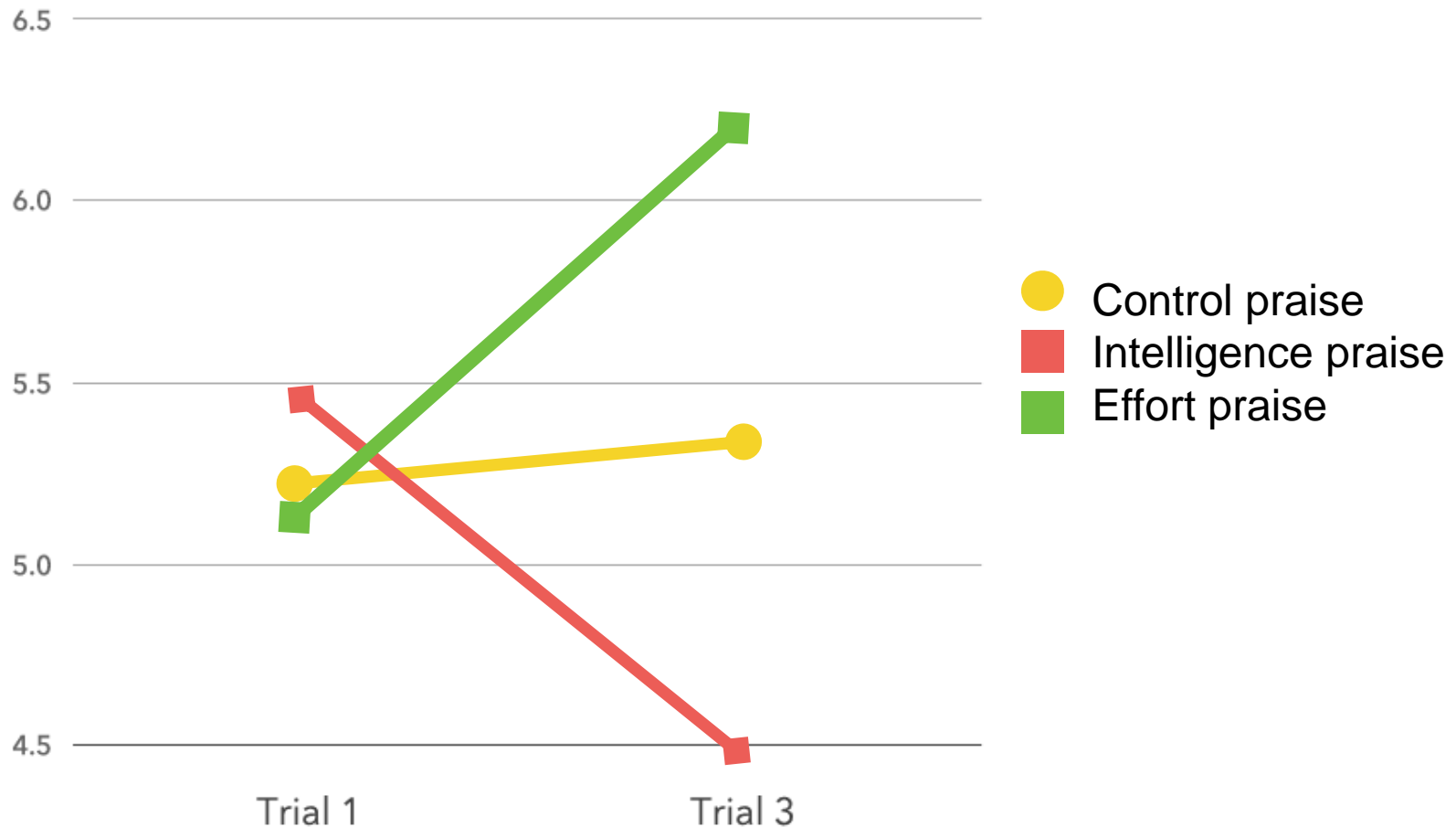


Praise Effects on IQ Test Performance:

- Completed moderately difficult IQ problems
- Received positive feedback (intelligence praise, effort praise, or control)
- Completed **very difficult** IQ problems
- Received negative feedback that they did a lot worse
- Completed moderately difficult IQ problems



Number of Problems Solved Before and After Setback





Growth Mindset Praise

Don't Focus On:

- Qualities commonly *interpreted* as **stable**, like talent or intelligence

Do Focus On:

- Effort and strategies used
“I like how you tried a new way to solve that.”
- Abilities *improving* over time with practice
“You’ve been practicing and I can see it’s paying off.”
- Mistakes and being challenged as necessary part of learning
“I love mistakes because they’re an opportunity to learn
– being challenged is when the brain grows most.”



The Power of Beliefs: What is a Growth Mindset and How Can It Help You Succeed?

SCIENCE OF SUCCESS:
WHAT RESEARCHERS KNOW
THAT YOU SHOULD KNOW



People with a growth mindset are more likely to:

- Take on projects in which they can learn new things even if doing so highlights their current weaknesses
- Take on risky projects
- See mistakes as opportunities for learning
- Seek out negative feedback and persist when faced with hurdles and setbacks
- Be motivated by negative feedback, hurdles, and setbacks





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- Academic performance
- Resilience
- Test scores in math
- Community college remedial math grades
- Medical students' grades
- Hong Kong students' willingness to take English classes
- Managers' willingness to coach employees and competence in doing so

Power of the Growth Mindset

Power of the Growth Mindset
How to Cultivate a Growth Mindset



The Power of Beliefs: What is a Growth Mindset and How Can It Help You Succeed?

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To develop a growth mindset

1. Reflect:

- Does your everyday language promote a fixed mindset (“I’m not a people person”) or growth mindset (“I can develop great social skills if I try”)?
- If you’re a parent, do you say things to your children that promote a fixed (“You’re a natural...”) or growth (“Hard work pays off...”) mindset?

2. Take action:

- Praise yourself and others for using strategies, effort, and resilience to develop skills and talents.
- Remember the power of “Not Yet”.
- Work hard to develop skills and confidence in areas that you’re not yet good at.

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The Power of Beliefs: How the Growth Mindset Reduces the Negative Impacts of Prejudice

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People Who Experience Stereotype Threat

- Are more likely to use narrow problem solving strategies due to stress, which in turn can result in lower performance on tests
- Which can lead to lower overall performance
- Which can lead to choosing easier academic or career options and opting out of courses and careers in areas that require expertise in areas that are not common for people in their groups

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Stereotype threat can be situational. In one study conducted in the U.S., researchers Margaret Shih, Todd Pittinsky, and Amy Trahan found that when Asian American women's identity as *Asians* was primed, they performed better on a test of quantitative reasoning. This is called "stereotype boost." When Asian American women's identity as *women* was primed, they performed worse. This is called "stereotype threat."

To prime the study participants' identity, all the researchers had to do to was to ask the participants to complete a survey emphasizing the study participants' identity as Asians or as women before taking the test.

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You know,
that was an
inappropriate
thing to say
about the job
candidate.

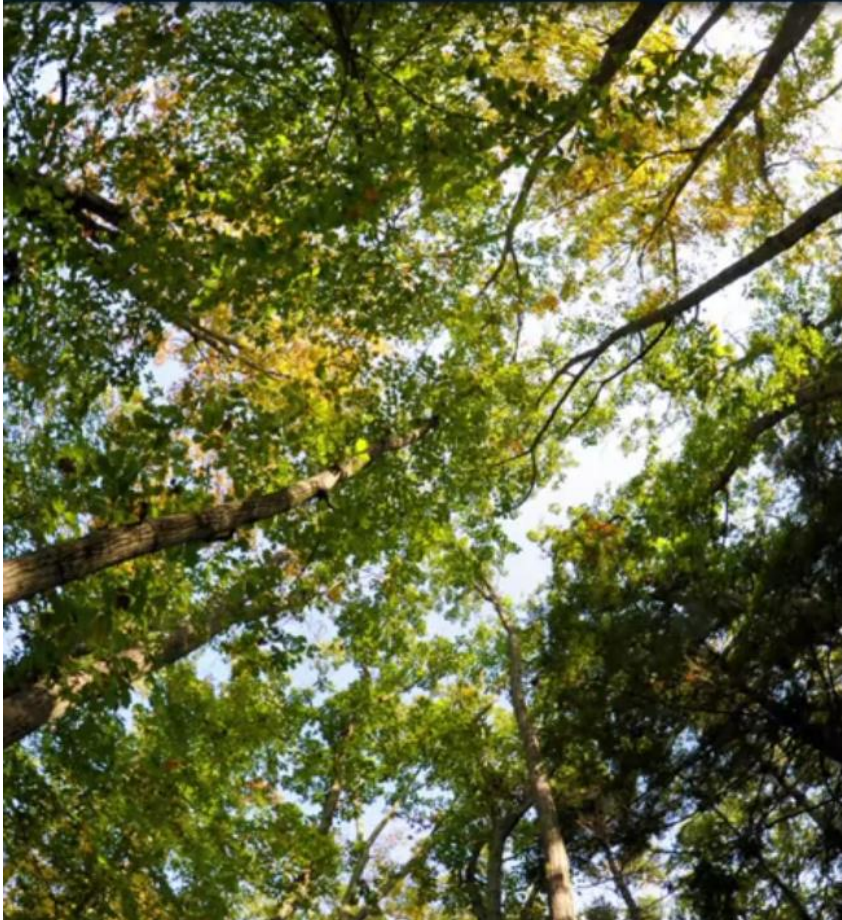
I realized that
right after I
said it. I
should have
apologized
and corrected
myself.

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Advantages of the Growth Mindset

- Having a growth mindset increases effort, persistence, and resilience, which in turn have significant impacts on performance.
- People can be taught the growth mindset through small, brief, and inexpensive interventions.
- The benefits of a growth mindset may be even more important for people who are exposed to negative stereotypes because it can protect them from the damaging effects of these stereotypes.

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