And How to Cultivate These Beliefs
Amongst Our Children

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Plan

1. What is a learning mindset? (Also referred to as a “growth mindset”)

2. Why does a learning mindset matter?

3. Can mindsets be changed? And if so, how?
1. What is a Learning Mindset? (Growth Mindset)?

vs. a Performance Mindset (Fixed Mindset)
Learning Mindset

• Approaching ‘challenging situations’ with the attitude “it’s a chance to learn & develop”
• Enjoying learning for its own sake
• Hand in hand with a focus on “growth”
  – A belief that that abilities can be developed / that change is possible
“I might not be great at this. I will improve if I give it a go and keep trying”.

“I don’t know if I can do this; it’s a good chance to learn something new”.
Performance Orientation

• Approaching ‘achievement situations’ with a strong focus on ability & performance
  – A “proving” form of performance orientation means a strong desire to show competence & prove oneself

“I hope I am good at this so I can show everyone how smart I am”
An “avoiding” for means a tendency to avoid situations where might perform poorly or have negative judgement.

“I don’t know if I can do this… I will stay over here in case I can’t perform well and look bad.”
Fixed Mindset

A performance orientation goes hand in hand with the idea that “ability is fixed”

- How well you do in the situation reflects your ability, and you believe ability can’t change

“You can’t teach an old dog new tricks”
Summary

Fixed Mindset (“proving”)

“Hmm, I can’t do this yet…. How about I try this…?”

“I’m no good at maths. I can’t do this”

“Everyone’s watching, I better get this right or they will think I am dumb”

Fixed Mindset (“avoiding”)

“I’m no good at maths. I can’t do this”

“My learning mindset is fixed.”

Learning Mindset

“Everyone’s watching, I better get this right or they will think I am dumb”
What is your mindset?

- Fixed Mindset (FM): 2.8
- Performance Orientation- Avoiding (PO_avoid): 2.5
- Performance Orientation- Proving (PO_prove): 3.5
- Learning Orientation (LO): 4.2

Benchmarks (N = 350 MBA managers)
2. Why does a Learning/Growth Mindset matter?
My Own Story
### What Mindsets Do Goals

<table>
<thead>
<tr>
<th>Fixed Mindset Students Say</th>
<th>Growth Mindset Students Say</th>
</tr>
</thead>
<tbody>
<tr>
<td>“I want to get the highest mark”</td>
<td>“I want to learn interesting things”</td>
</tr>
<tr>
<td>“If I don’t get the highest mark, I am really disappointed”</td>
<td>“It’s much more important for me to learn things in my classes than it is to get the best grades.”</td>
</tr>
<tr>
<td>“My goal is to do the easiest thing possible”</td>
<td></td>
</tr>
<tr>
<td>“I prefer not to try too hard”</td>
<td></td>
</tr>
</tbody>
</table>
Consider the remainder of the scenarios in the sheet
## What Mindsets Do

### Openness To Challenge

<table>
<thead>
<tr>
<th>Fixed Mindset Students Say</th>
<th>Growth Mindset Students Say</th>
</tr>
</thead>
<tbody>
<tr>
<td>“This looks hard. Best not to try in case I fail”</td>
<td>“I am not sure I can do this now, but I think can learn to ...”</td>
</tr>
<tr>
<td>“What if I can’t do it? Maybe I don’t have the talent”</td>
<td>“I might not do very well at first. I will learn to do better over time”</td>
</tr>
<tr>
<td>“I better do really well at this; I hope I don’t mess up ”</td>
<td></td>
</tr>
</tbody>
</table>
## What Mindsets Do Effort Beliefs

<table>
<thead>
<tr>
<th>Fixed Mindset Students Say</th>
<th>Growth Mindset Students Say</th>
</tr>
</thead>
<tbody>
<tr>
<td>“When I work hard at my school work it makes me feel like I’m not very smart.”</td>
<td>“The harder you work at something, the better you’ll be at it.”</td>
</tr>
<tr>
<td>“I don’t want to try to hard in case I don’t do well and then I will look stupid”</td>
<td>(If others are not performing well: “You can improve and develop with practice”)</td>
</tr>
</tbody>
</table>

Blackwell et al., 2007
### What Mindsets Do Response To Mistakes

<table>
<thead>
<tr>
<th>Fixed Mindset Students Say</th>
<th>Growth Mindset Students Say</th>
</tr>
</thead>
<tbody>
<tr>
<td>“I must not be very good at this”</td>
<td>“I learn a lot from my mistakes”</td>
</tr>
<tr>
<td>“I am stupid”</td>
<td></td>
</tr>
<tr>
<td>“You are stupid” (judge others harshly also)</td>
<td></td>
</tr>
</tbody>
</table>

Gervey et al., 1999
## What Mindsets Do Strategies After Failure

<table>
<thead>
<tr>
<th>Fixed Mindset Students Say</th>
<th>Growth Mindset Students Say</th>
</tr>
</thead>
<tbody>
<tr>
<td>“I failed the test because I am dumb”</td>
<td>“I will work harder in this class from now on.”</td>
</tr>
<tr>
<td>“I will spend less time on this subject from now on.”</td>
<td>“I will spend more time studying for the tests.”</td>
</tr>
<tr>
<td>“I will try to cheat on the next test.”</td>
<td></td>
</tr>
<tr>
<td>“I prefer to give up”</td>
<td></td>
</tr>
</tbody>
</table>
What Mindsets Do

Response To Negative Feedback

<table>
<thead>
<tr>
<th>Fixed Mindset Students Say</th>
<th>Growth Mindset Students Say</th>
</tr>
</thead>
<tbody>
<tr>
<td>“I’d rather not hear what you think if it’s bad…”</td>
<td>“Even though it’s painful, I will listen and then I can try again.”</td>
</tr>
<tr>
<td>“It’s not my fault… it’s someone or something else’s fault”</td>
<td></td>
</tr>
</tbody>
</table>
What Mindsets Do

Asking For Help

Fixed Mindset Students Say

“If I ask a question I might look stupid”

Growth Mindset Students Say

“Asking for help will help me learn.”

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Math Achievement in Junior High School


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Research Example 2

Hong Kong University students with poor English scores on test

Offered chance to study English (classes taught in English)

Taken up only by those with a growth mindset!

Hong et al., 1999
Research Example 3

- Meta analysis, 148 studies (N = 34,000):
  - A learning mindset predicted academic and job performance (beyond personality and cognitive ability)
  - An avoiding performance orientation negatively associated with performance
  - Why? Individuals with a learning mindset:
    - Set higher goals
    - Higher confidence/ self-efficacy
    - Engaged in more effective learning strategies
    - Willing to seek feedback
    - Lower anxiety

Payne et al., 2007, Journal of Applied Psychology
Other Examples

"I've missed more than 9,000 shots in my career. I've lost almost 300 games. 26 times I've been trusted to take the game winning shot and missed. I've failed over and over and over again in my life. And that is why I succeed."

~ Michael Jordan
3. Can Mindsets Be Changed? And If So, How?

“I’m no good at maths. I can’t do this”

“Hmm, I can’t do this yet.... How about I try this...?”
Your “Typical” Learning Mindset (see your survey scores!)

The Messages Your Get

Your Mindset In Any Particular Situation
Trial 1: Each student given easy problems from non-verbal IQ test
Then each student randomly was given one kind of praise

Intelligence Praise

“Wow, that’s a really good score. You must be smart at this.”

Effort Praise

“Wow, that’s a really good score. You must have tried really hard.”

Control Group

“Wow, that’s a really good score.”

Trial 2: Each student given hard problems that most failed

Trial 3: Then each student given easy problems again

Research Example 1

# of problems solved on the IQ test

**Trial 1 (before “failure”) and**

**Trial 3 (after failure)**

- Effort Praise
- Control Praise
- Intelligence Praise
Effects of Intelligence vs. Effort Praise

After difficult trial

Intelligence Praise
Fixed
Goals: Looking Smart
Confidence: Low
Motivation: Low
Performance: Decreased

Effort Praise
Growth
Learning: High
High
Increased
Lying: Students who misrepresented their scores

Proportion of Children

Intelligence Praise

Intelligence

Control

Effort Praise

Effort
Messages For Learning

• Praise

That homework was very hard. I really admire the way you concentrated to get it done.

That picture has many lovely colours, tell me about them.

I liked the effort you put in, but let’s work together some more and figure out what you don’t understand.

• Other messages:

- About ‘failure’/ when your child messes up or ‘does poorly’?
- Reassurance before tests?
- Focus on improvement, effort, learning,
Research Example 2

• Adults about to engage in a complex decision-making simulation…
  – **Group 1 told:** Decision-making skills are developed through practice; more practice in the simulation, the better you get
  – **Group 2 told:** Decision-making skills reflect your basic cognitive capacities; simulation good way to assess your capabilities

What do you think happened?

Group 2: Lower confidence, lower goals, less efficient analytic strategies AND…. a decline in performance over time

Research Example 3

Comparison of the effects of:
- Study Skills Training
- Control Group
- Growth Mindset Training

- you can read this article at:
  http://www.brainology.us/websitemedia/
youcangrowyourintelligence.pdf

Change in Math Grades

- Time 1
- Time 2 (Pre-Intervention)
- Time 3 (Post-Intervention)

Math Grades

- Control
- Growth
% Identified as Increasing in Motivation

For more evidence of growth mindset training impact, see https://www.mindsetworks.com/websitemedia/info/impactsummaryhandout.pdf
The Brainology® Program

• Interactive, online North American program to cultivate a growth mindset.

• Students follow animated characters as they tackle issues in their most difficult subjects.

• Brainology® Growth Process:

  Brain Science + Study Skills = Motivation & Achievement

  “I can develop my brain!”
  “I know how to develop my brain!”

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Example “Messages”

• Your brain is like a muscle
  – brain grows more new cells and connections when you learn
  – you get smarter by exercising your brain, much the same way that you get stronger by exercising your muscles
  – Exercise the brain exploring new information, learning new concepts, and practicing skills.
  – The more connections you make, the easier it gets to make new ones
Outcomes


"…now I know better ways to get good grades on tests. Before, I thought you could be born with how smart you are going to be when your older. After brainology, I figured out that you can get smarter and grow new connections in your brain."
– 6th grader in Virginia
Summary: Fostering A Growth Mindset

- Praise effort, strategies not ability/talent
- Focus on improving, not proving
- Set learning goals
- Highlight the role of practice
- Learn from others, but avoid constant comparisons
- Encourage learning from errors
- Highlight the brain’s potential to develop
- Challenge growth rather than validating brilliance
Recap
Some concluding words.

“I have no special talents, I am only passionately curious”
(Albert Einstein)
Thanks for Listening!

Questions?
Follow Up Material

Studies (there are many more)


Podcasts/ news articles

go to https://www.mindsetworks.com/media/inthenews.aspx
http://www.ted.com/talks/carol_dweck_the_power_of_believing_that_you_can_improve?language=en
See also Ted talk Edwardo Briceno (EEO Mindworks)

On Line Resources

• http://www.mindsetworks.com/professional-development-and-tools/
• http://www.mindsetonline.com/
• http://www-psych.stanford.edu/~dweck/
• http://www.brainology.us/