

# Activators

How to make sure learning sticks

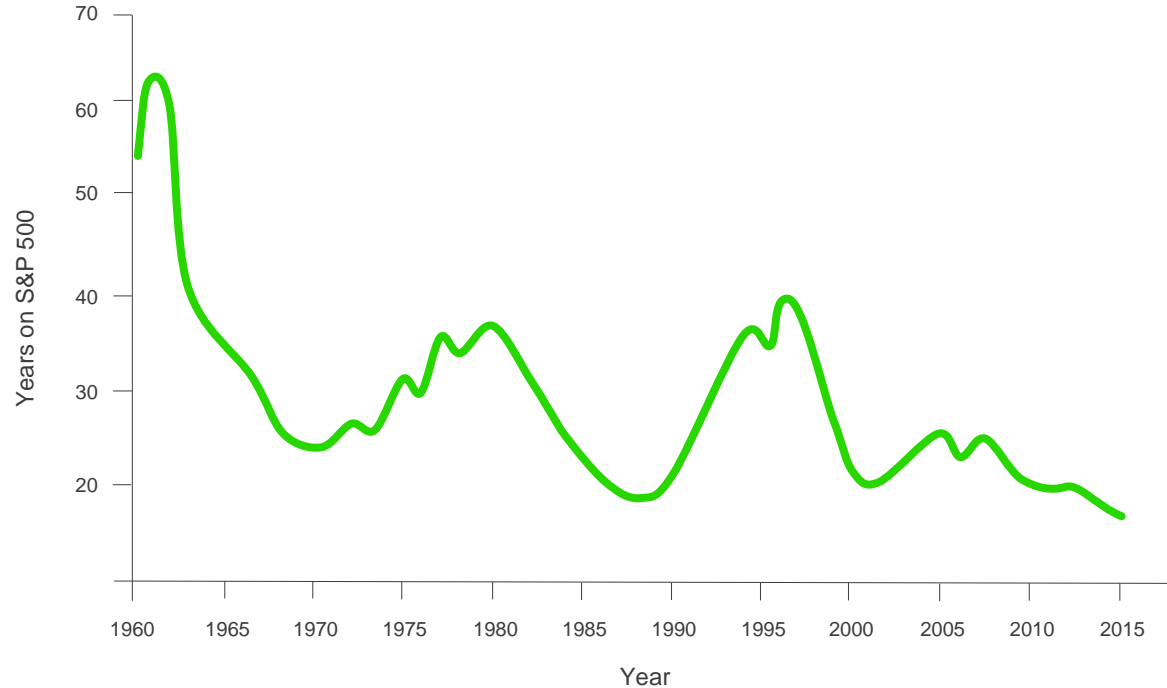
Sebastian Bailey  
President, Mind Gym Inc.  
@DrSebBailey



Activators Presentation | © Mind Gym Inc



# A VUCA world



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In 1961, the life expectancy of a firm in the Fortune 500 was around 61 years. Now it's **less than 18 years**

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**Only 12.2%** of the Fortune 500 companies in 1955 were still on the list in 2014

# Thriving on disorder

“

Some things benefit from shocks,  
volatility, randomness, disorder and stressors

”

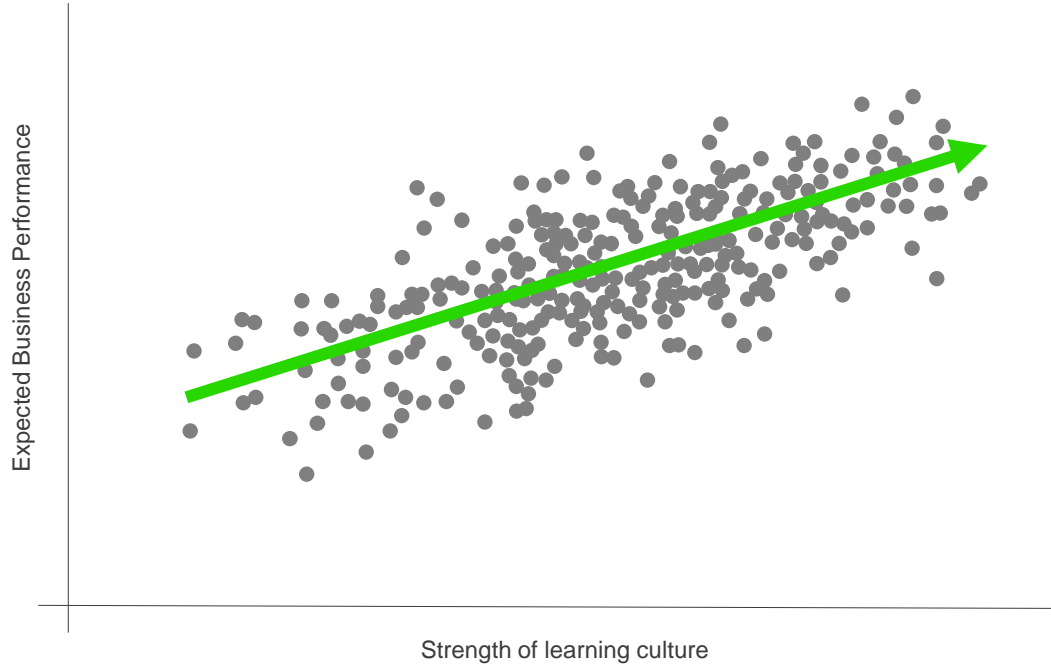
— Nassim N. Taleb

Fragile

Robust

Antifragile

# A business impact



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## Outcomes include:

- Employee productivity
- Customer satisfaction
- Ability to keep costs competitive
- Market leadership for at least one product or service

# But learning is difficult

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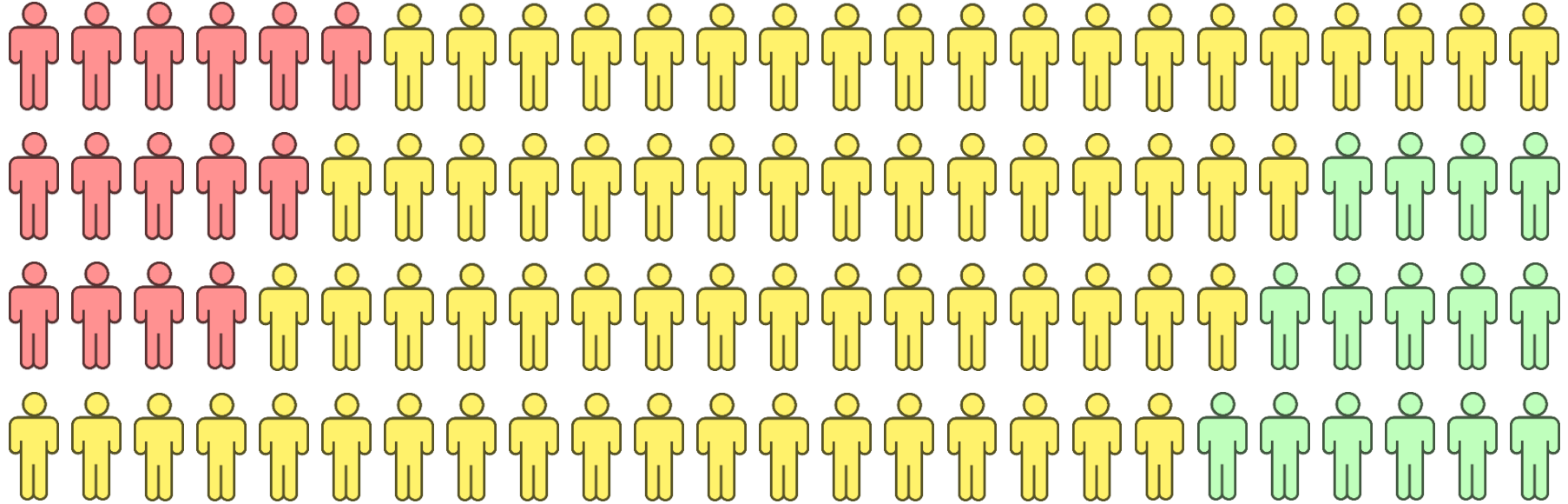
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# Learning did not transfer.

$$e + s$$

# How many people change?



# Have you ever wondered?

Try to recall high school biology

Look it up on Bing or another search engine

Ladybirds are red.

Ask another pair what they thought

So are strawberries.

Decide the question is irrelevant and talk about something else

Daydream about the taste of strawberries

Wonder why I called it a ladybird and not a ladybug





# An Activator...

“

...knows what to  
do when they don't  
know what to do.

”



# What is an Activator?



Curious



Resourceful



Persistent

# Carving the turkey

In 1981, Rangaswamy “Sri” Srinivasan worked for IBM.

One day while working with an ultraviolet excimer laser, he had an idea...



As of 2015...

5 5  
M I L L  
I O N E Y E  
S U R G E R I E S  
W O R L D W I D E

Subject: What would you like to see most in minix?

Date: 25 Aug 91 20:57:08 GMT

Hello everybody out there using minix –

I'm doing a (free) operating system (**just a hobby, won't be big and professional like gnu**) for 386(486) AT clones. This has been brewing since April, and is starting to get ready...

...Any suggestions are welcome, but I won't promise I'll implement them :-)

Linus (torvalds@kruuna.helsinki.fi) █

# Turned into







*Ever tried. Ever failed. No matter.  
Try again. Fail again. Fail better.*

*Ever tried. Ever failed. No matter.  
Try again. Fail again. Fail better.*

# They're more likely to....

## Curious



Explore challenges with an open mind  
Take an enthusiastic but discerning approach to new ideas  
Actively work to reduce the unknown

## Persistent



Give extra effort to create positive outcomes  
Continue performing, even after setbacks  
Achieve goals over long periods of time

## Resourceful



Generate strategies, then reflect on their understanding  
Make strides independently and then collaborate  
Pull from wide-ranging sources of information



# Lies, damned lies and statistics

Is intervention A related to outcome B?

p value—test of *significance*

**P = 0.05**

There is a 5% chance this is a random effect

**P = 0.01**

There is a 1% chance this is a random effect

**P = 0.001**

There is a 0.1% chance this is a random effect

Cohen's d—indicates *effect size*.

**D < 0.3**

Low effect

**0.3 < D < 0.6**

Medium effect

**D > 0.6**

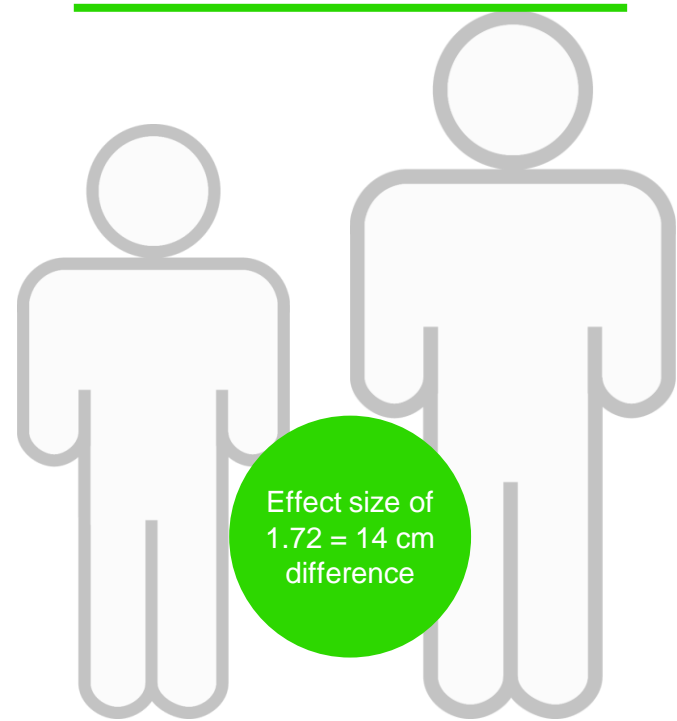
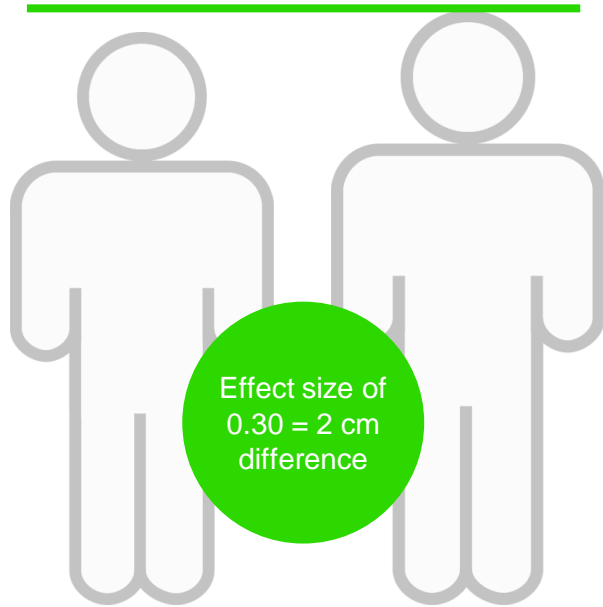
High effect

But... it doesn't tell you how big the effect is

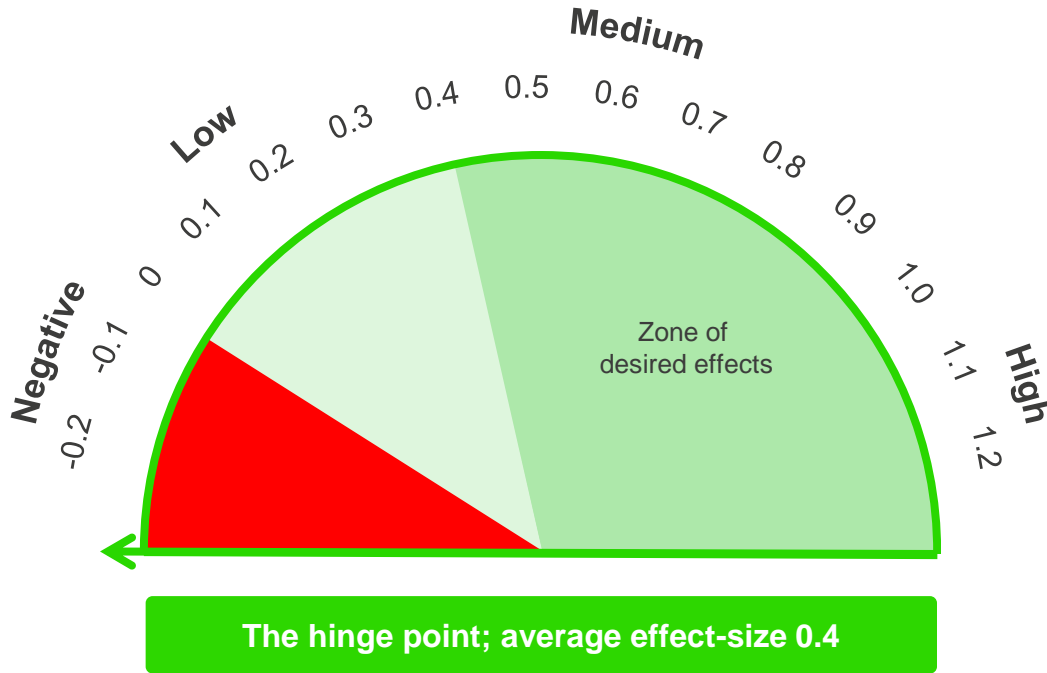
# Almost everything works...

- Audio-visual aids • Feedback • Individualization • Prior cognitive ability •
- Instructional quality • Behavioral objectives • Direct instruction • Team teaching •
  - Acceleration • Class size •
  - Participant's disposition to learn •
- Class environment • Providing formative evaluation • Challenge of goals •
  - Micro-teaching • Peer tutoring • Instructor clarity • Mastery learning •
- Reciprocal teaching • Post-learning tasks • Instructor-participant relationships • Instructor style •
  - Spaced vs massed practise • Questioning •
  - Meta-cognitive strategies • Peer effects • Prior achievement •
    - Simulation & games • Computer-assisted instruction •
- Creativity programs • Testing • Self-verbalization • Instructional media •
  - Professional development • Affective attributes of participants •

# So what's the difference?



# Focusing where it matters



# Which has the greater impact on learning?

Feedback

0.73

OR

Teacher's subject matter knowledge

0.09

Mentoring

0.15

OR

Peer tutoring

0.55

Time on task

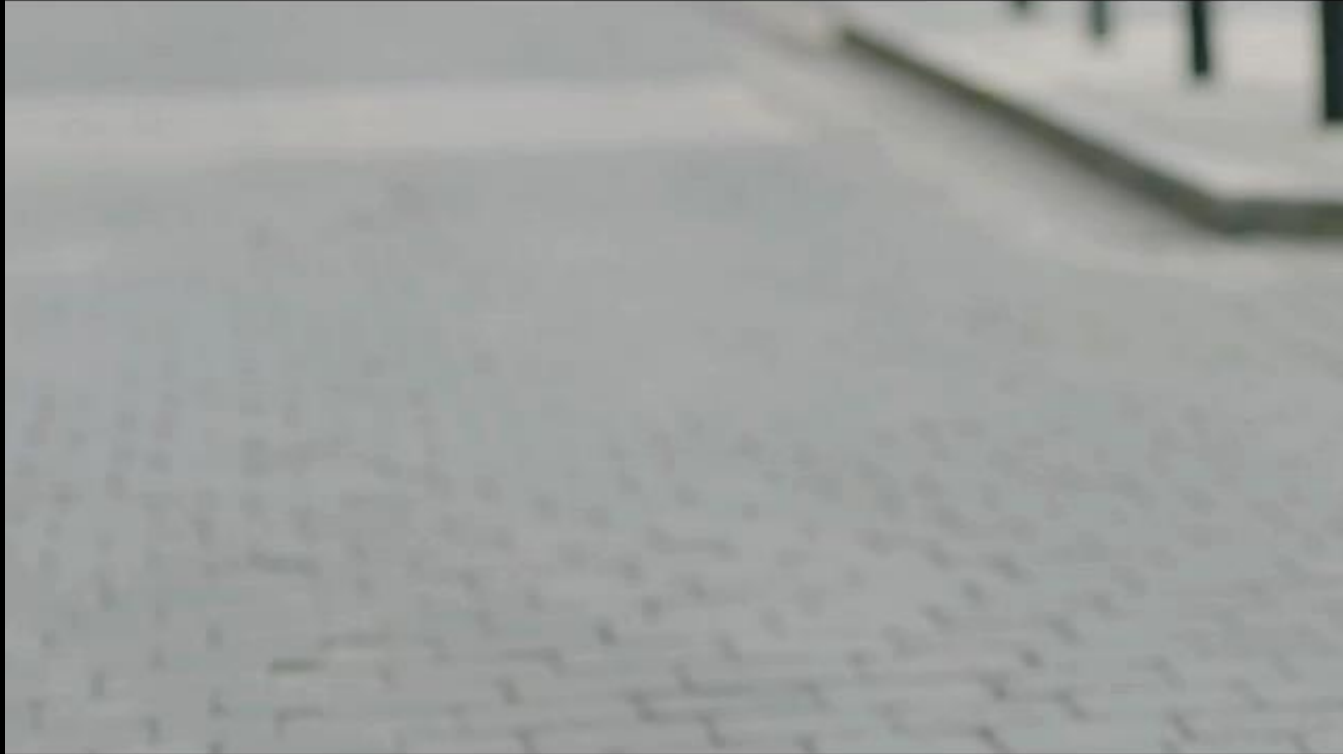
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OR

Spaced vs massed practice

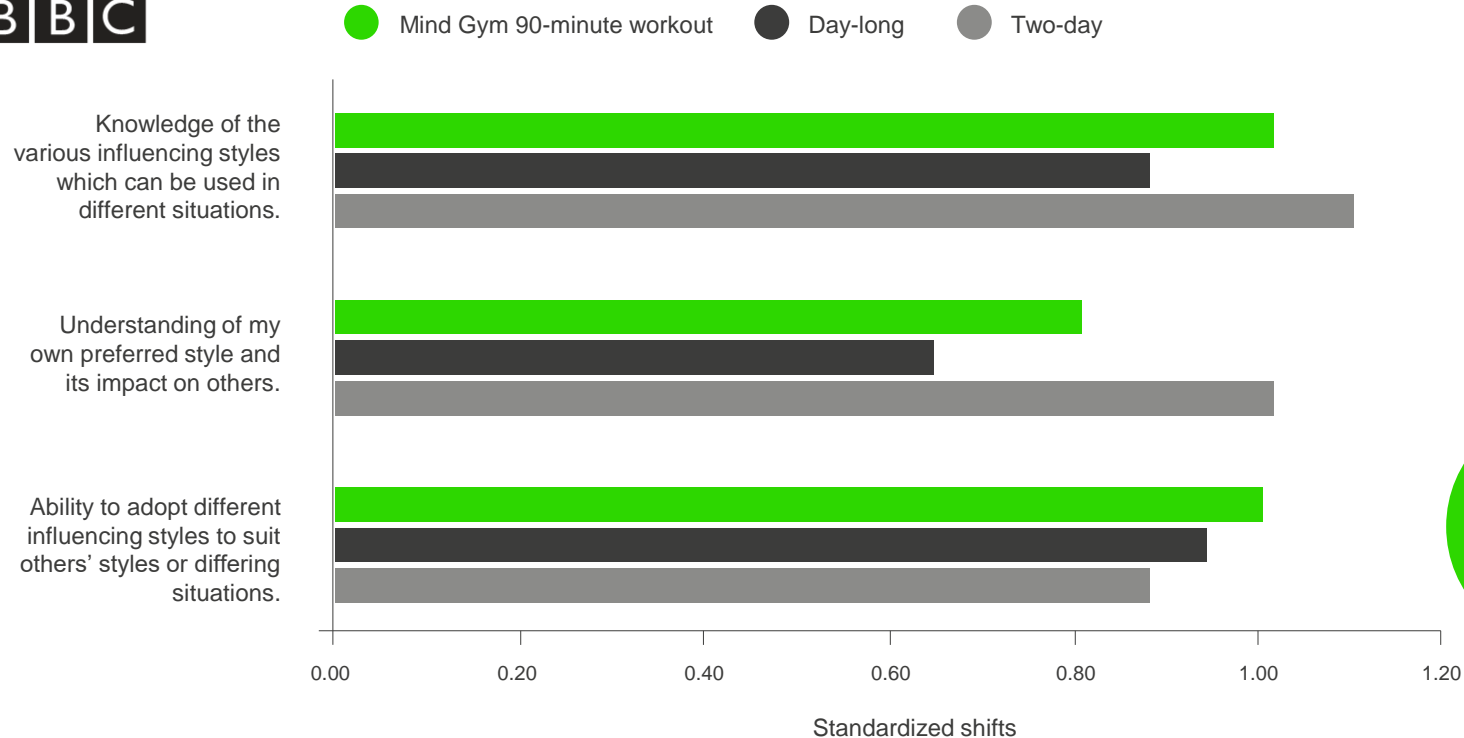
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# Connect to emotions

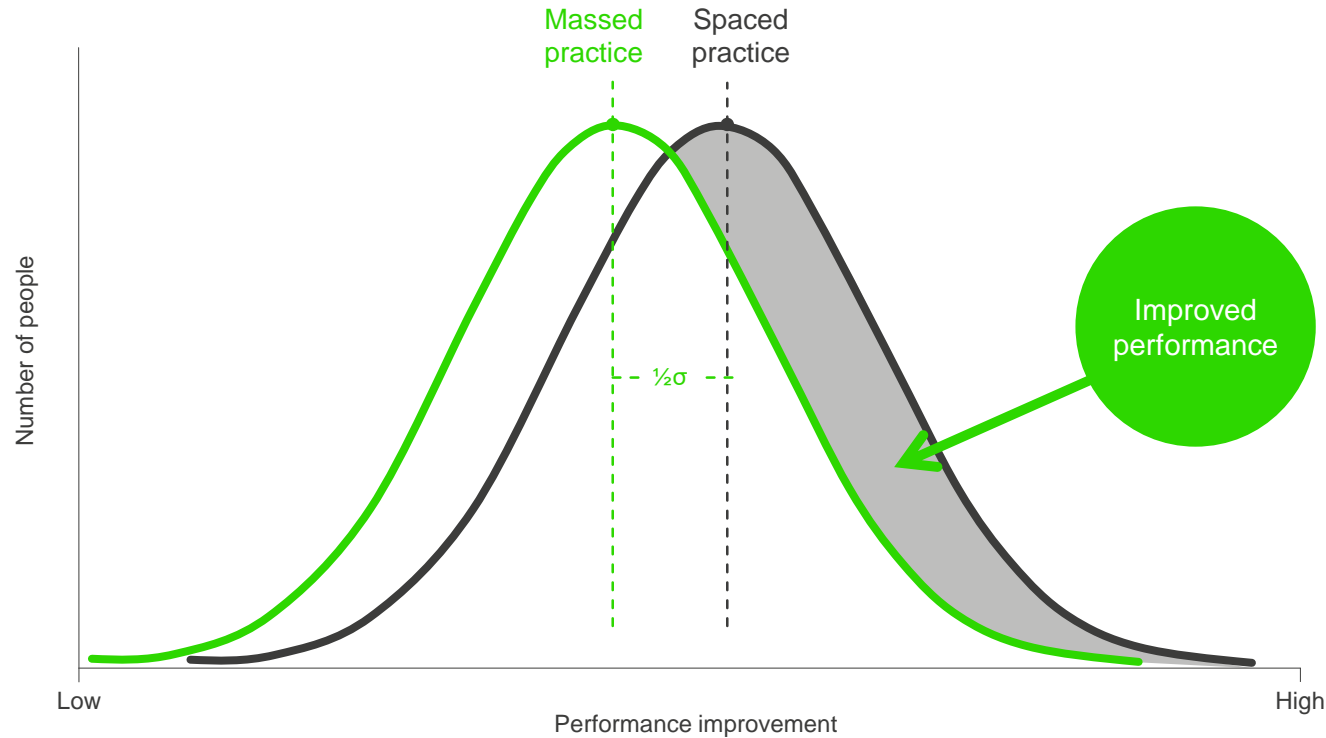


# Miniaturization pays

BBC

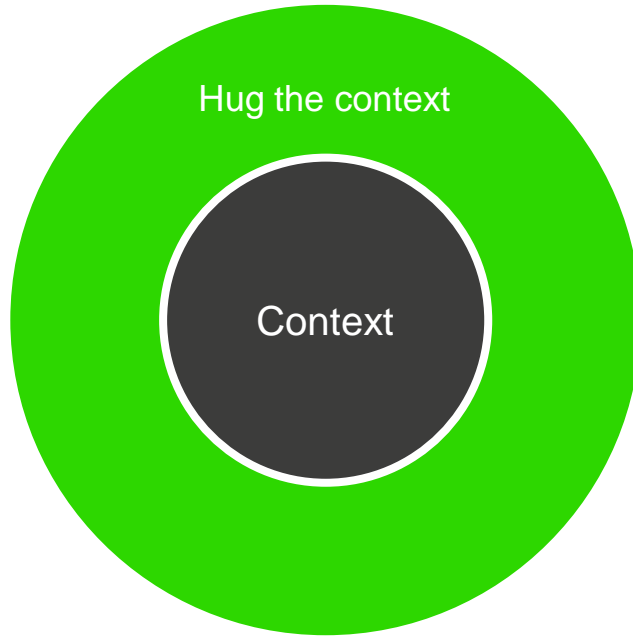


# Spaced practice



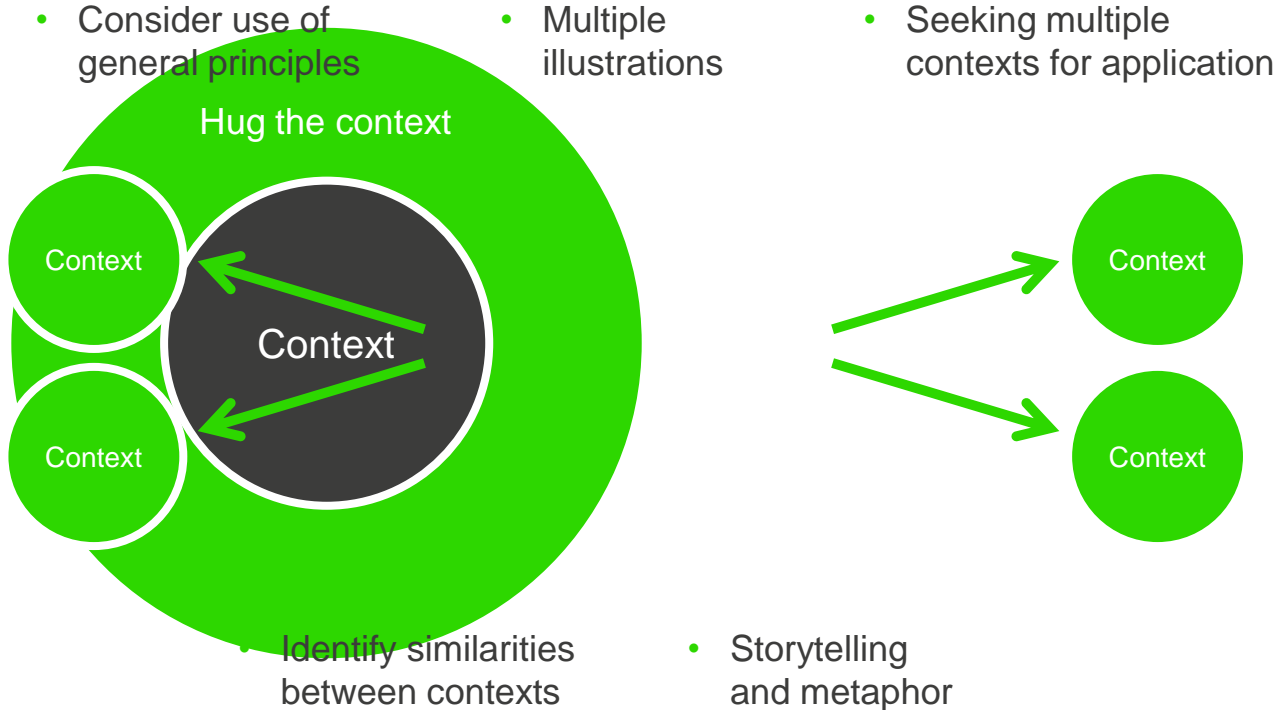


# Designing for application



- Simulations
- Role plays
- Case studies
- Problem-based learning
- Action learning sets
- Online forums
- Ruthless pragmatism

# Designing for application



# Create transfer opportunism

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Day-to-day challenges are a **barrier** to application:

*“I didn’t have a chance to try anything out because of the new product launch...”*

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Day-to-day challenges are an **opportunity** for application:

*“The product launch was actually a great opportunity to try out the new skills...”*

# Implementation intentions

## Results

### Group 1



The intention to perform a certain action at a given time and place

*e.g. I will do as many math puzzles as possible each Wednesday at 9 am.*

Participants deviated from their desired time by an average of:

**8 hrs**

### Group 2



Adding an "if-then" plan ("... and if situation x arises, I will perform behavior y") to goal intentions

*e.g. If it is Wednesday at 9 am, I will do as many math puzzles as possible.*

Participants deviated from their desired time by an average of:

**1½ hrs**

# Does feedback help?

33%

of feedback  
interventions damage  
performance

+15%

of feedback  
elicits no change  
in behavior at all

= 48%

has no  
beneficial impact

# The power of precision

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24 children

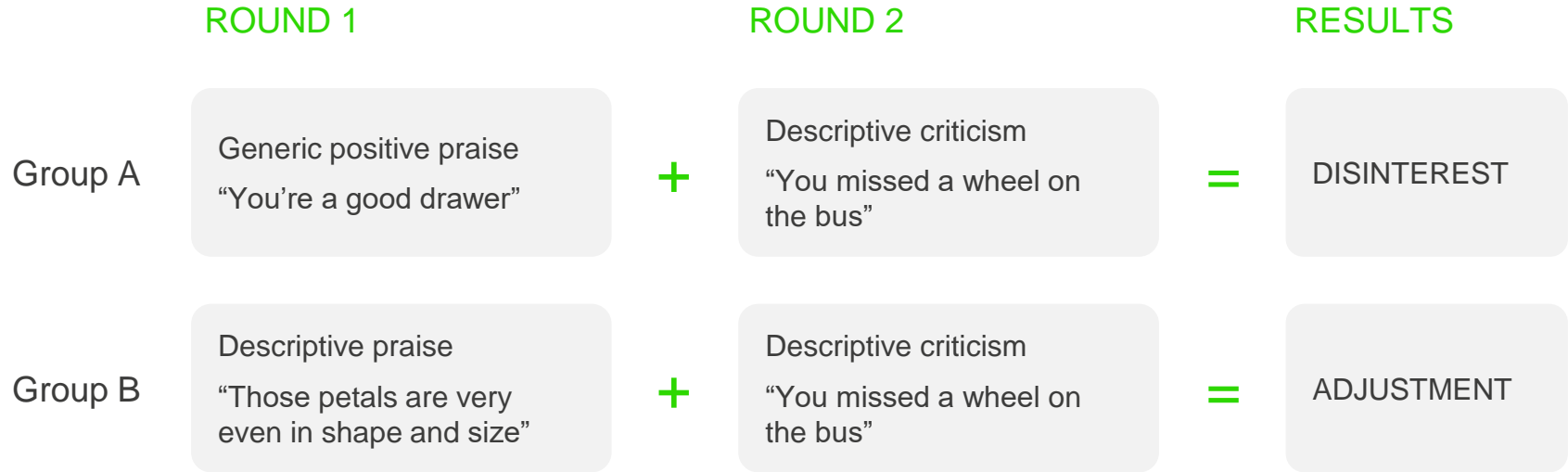
Researcher holds  
a “teacher” puppet

Child holds a  
“learner” puppet

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# The power of precision







# Priming in practice

Listen to this clip:



Now listen to this:



Did you understand anything?

“It's fun to smoke marijuana.  
It's fun to smoke marijuana.  
It's fun to smoke marijuana.  
It's fun to smoke marijuana.”

# Priming for growth



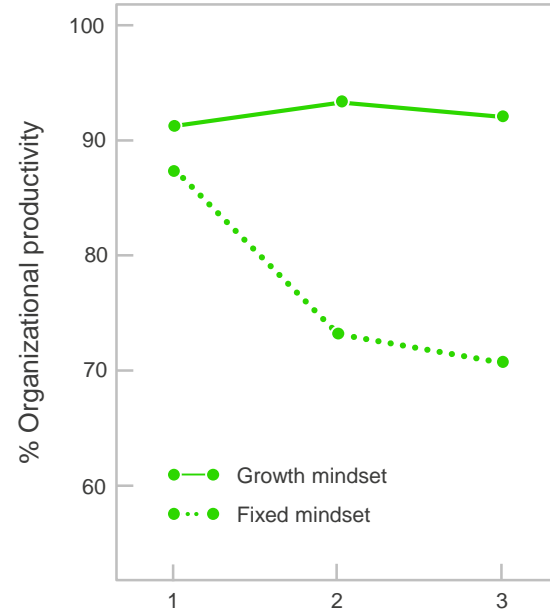
Fixed mindset—Your abilities are fixed and your potential is determined at birth.

“This task measures your basic underlying managerial abilities”

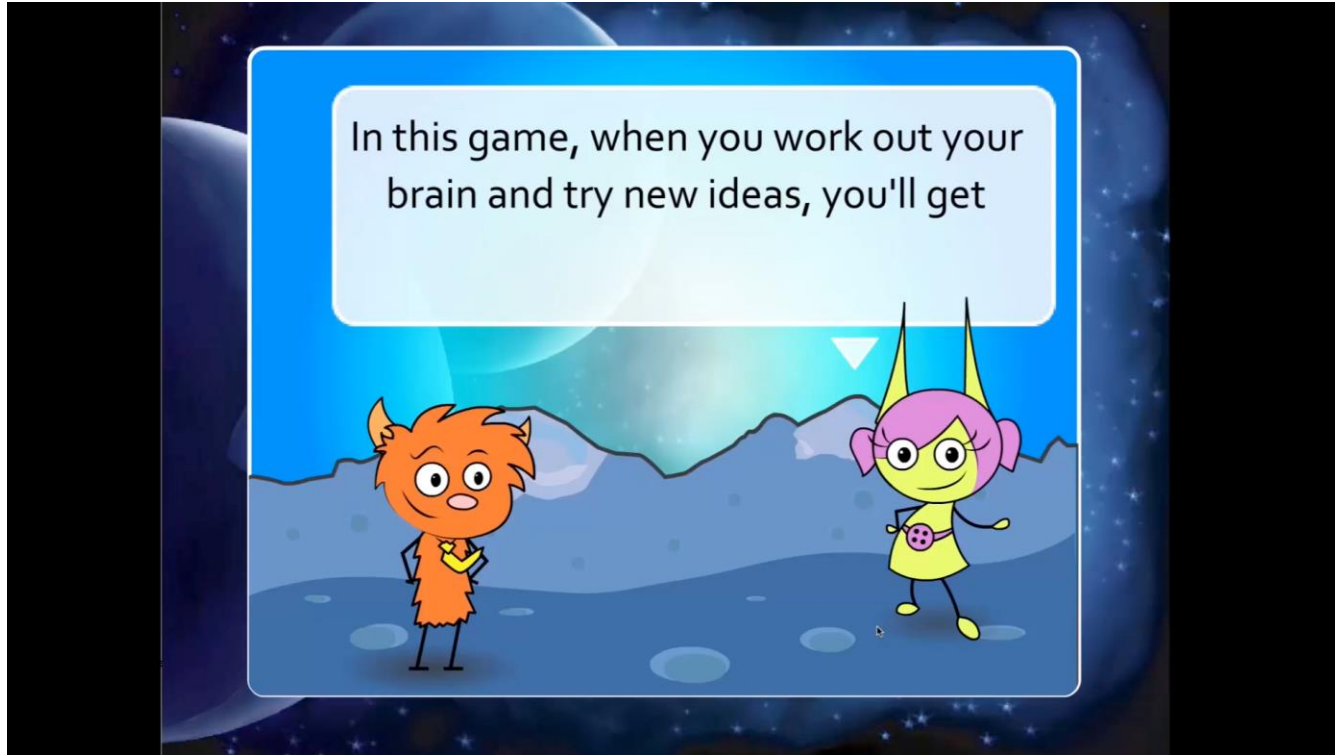


Growth mindset—Your abilities can be continuously developed, and your full potential is unknowable.

“This task measures how you develop your managerial skills through practice and feedback”



# Becoming is better than being



# Becoming is better than being



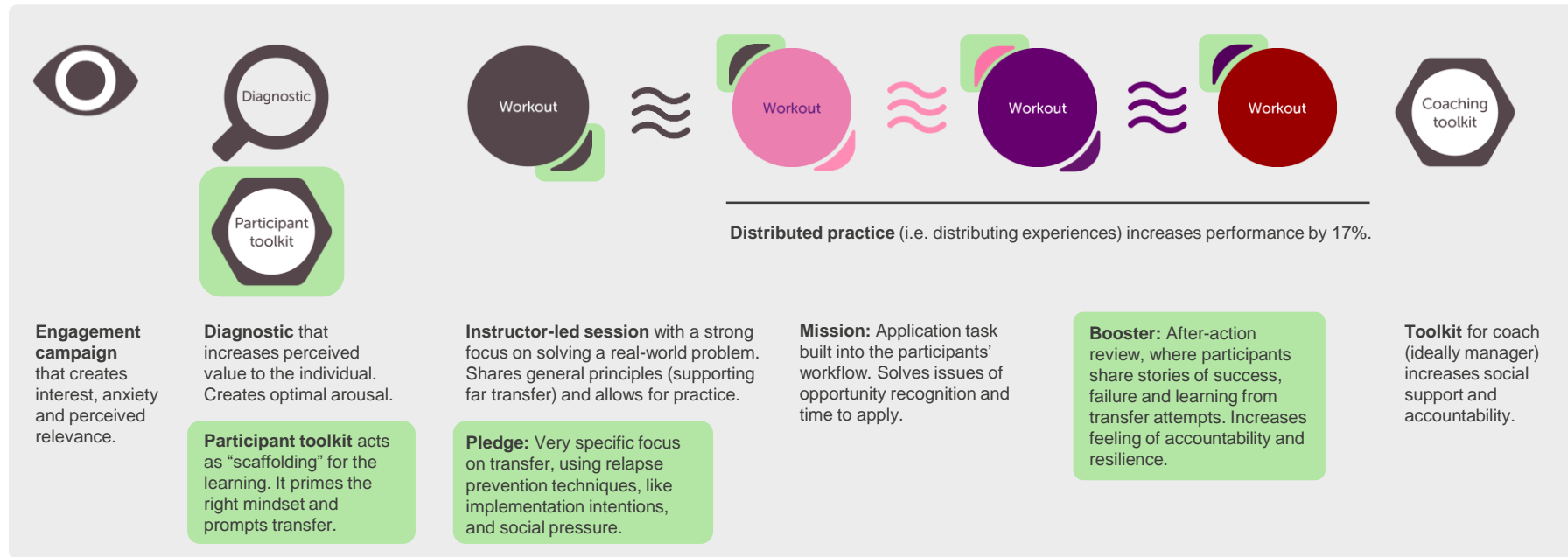
# Becoming is better than being



# Making learning stick



# Bite-sized learning methodology



# Get in touch

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