

Investigating Reading Fluency and Comprehension as a Peculiarity of Collective Wellbeing – Aligning with a Thought Leader’s Mindset Framework for the OECD Learning Compass 2030

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Effective and Sustainable Knowledge Transfer and Skills-development at Universities
in the Age of Digital Transformation



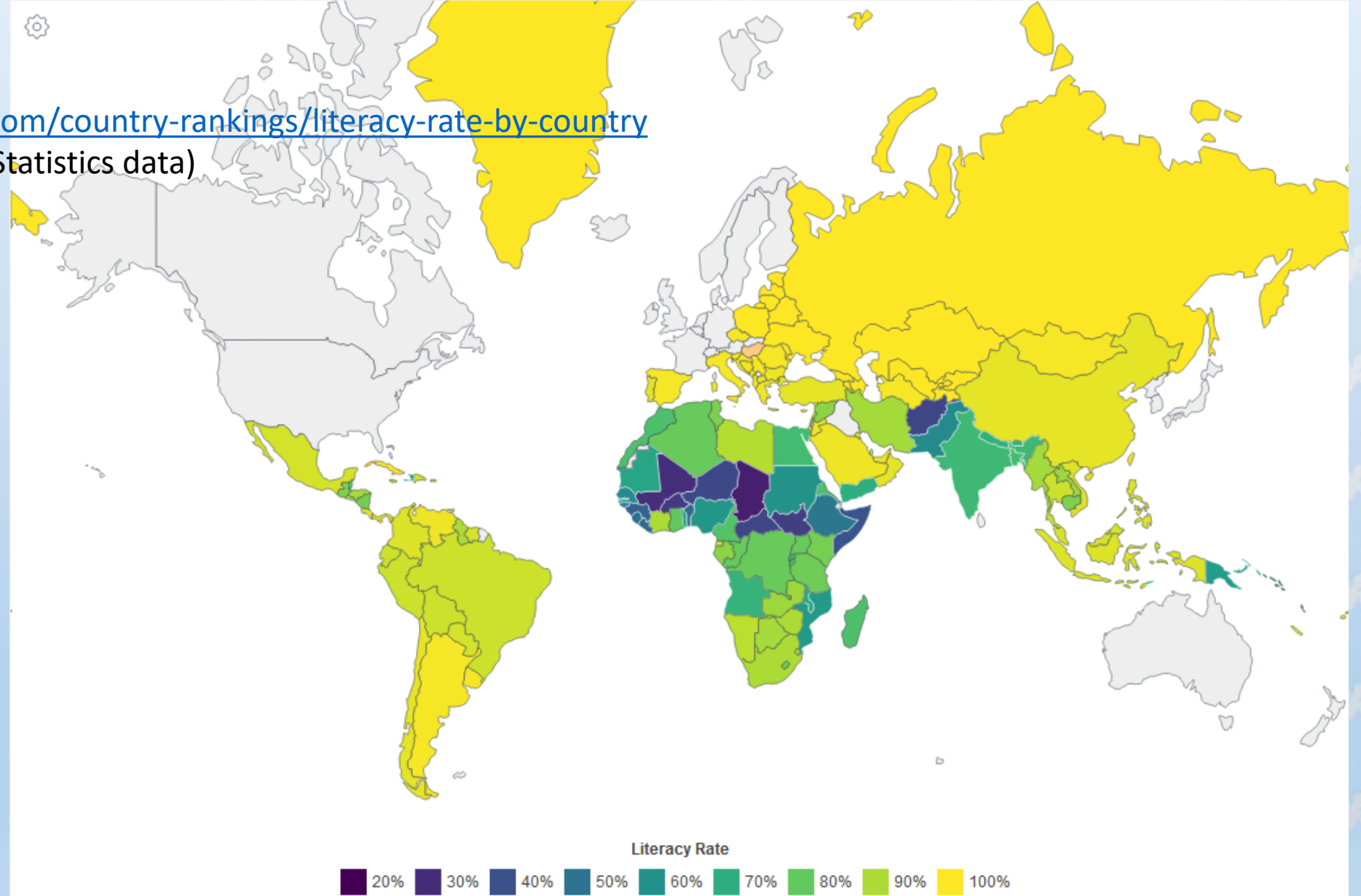
In this presentation

- Literacy – reading, fluency, comprehension: interpretation and data
- Aims and preliminary empirical research results of a related ongoing HAS Research Group
- Collective well-being as an overall goal of the OECD 2030 Learning Compass
- Dweckian mindset approach
- Mindset and reading – related international research results
- Applicability and further research in Hungary

2024 World Population Review

<https://worldpopulationreview.com/country-rankings/literacy-rate-by-country>

(based on UNESCO Institute for Statistics data)



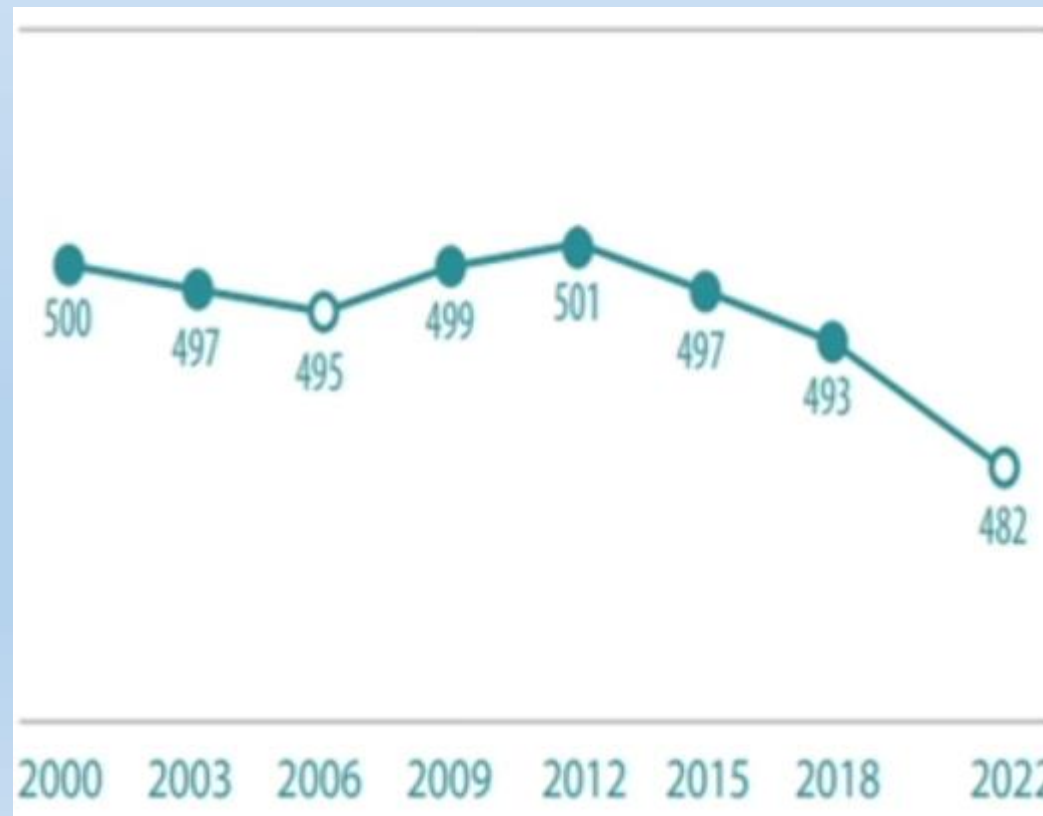
Hungary

Literacy Rate	Female Literacy Rate	Male Literacy Rate
99%	99.1%	99.1%

General OECD *PISA Reading* Results Decline

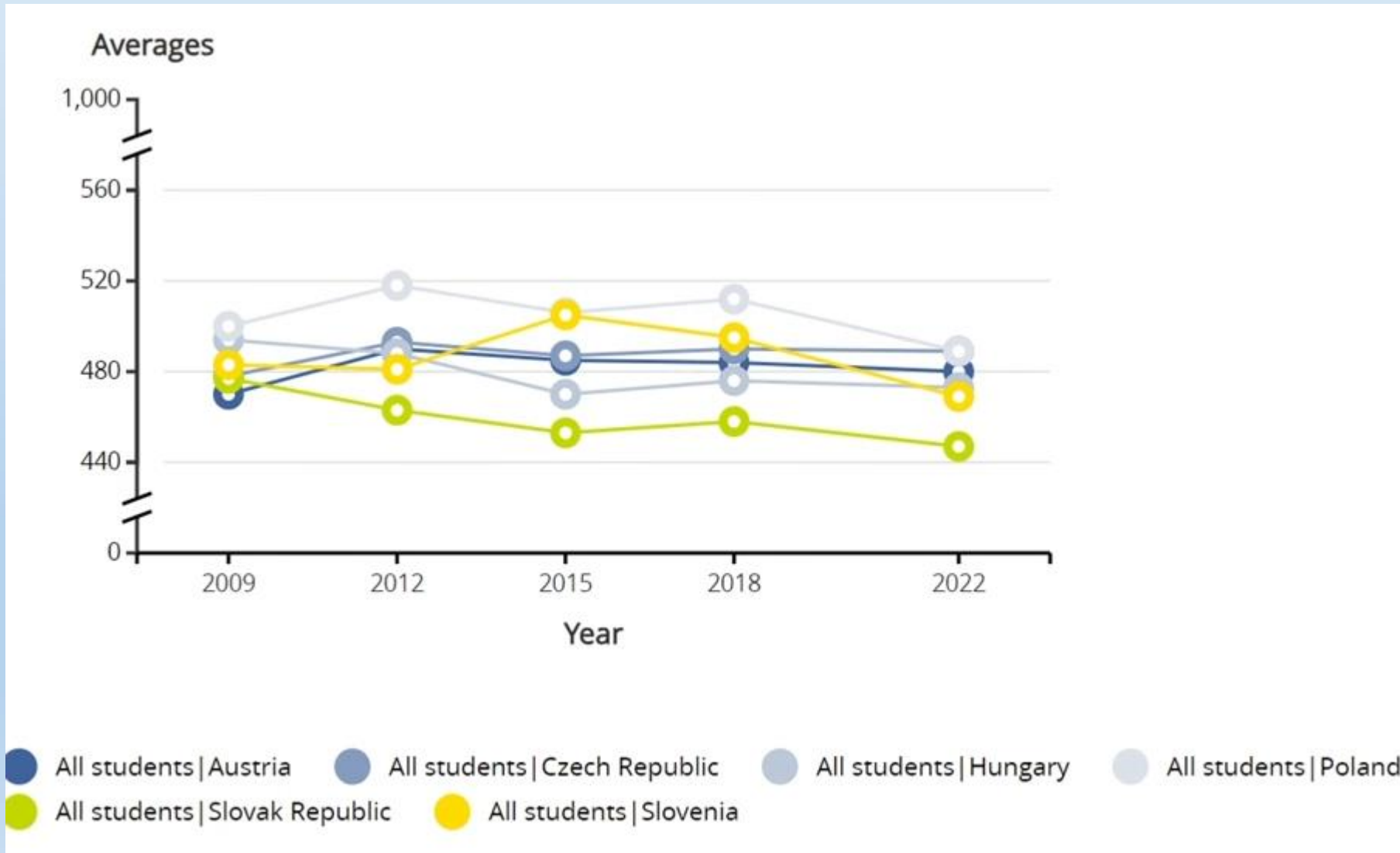
(Steklacs 2023)

Program for International Student Assessment – reading, mathematics, science vs real life challenges



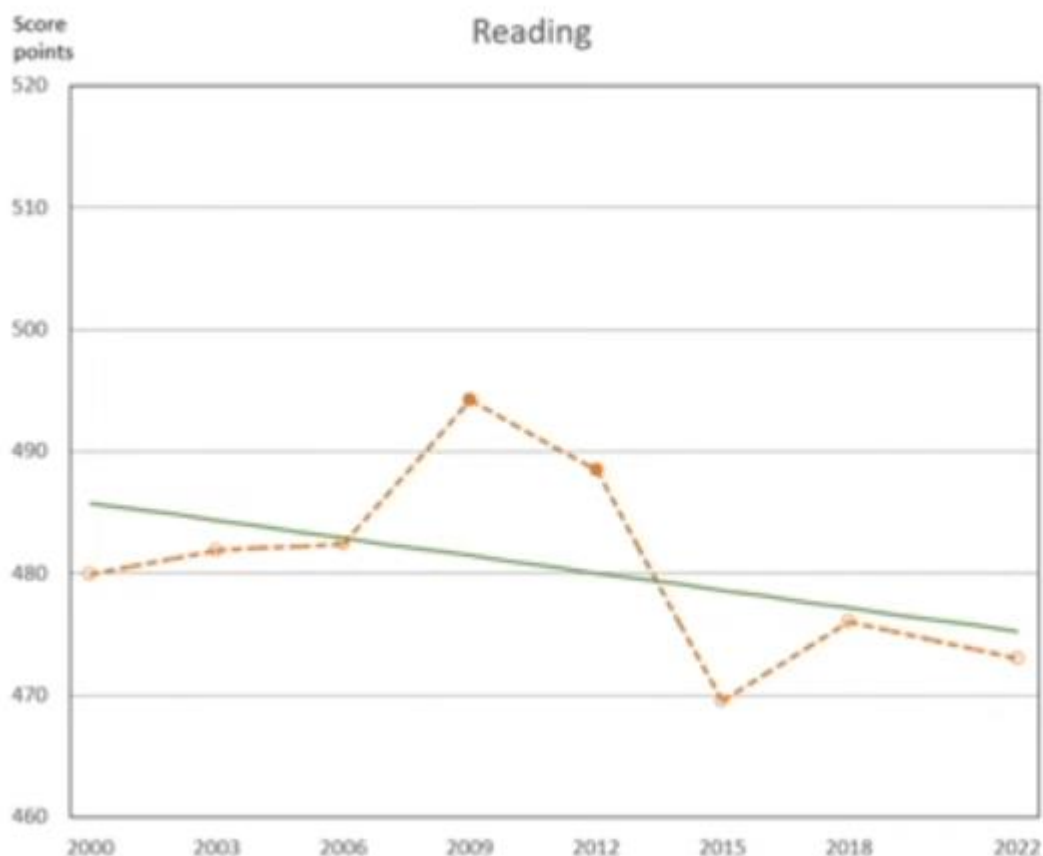
Regional PISA Reading Results

(Steklacs 2023)



OECD Results – Hungary

(Steklacs 2023)



	Mean performance	Reading
PISA 2000		480
PISA 2003		482
PISA 2006		482
PISA 2009		494*
PISA 2012		488*
PISA 2015		470
PISA 2018		476
PISA 2022		473
Average 10-year trend in mean performance (2012 to 2022)		-11.7
Short-term change in mean performance (2018 to 2022)		-3.0

Reading and Equity

	Mathematics	Reading	Science
Trends by quarter of socio-economic status (ESCS): 2018-22 / average 10-year trend			
Performance among advantaged students (top quarter of ESCS)	-5.0 / -2.5	+3.0 / -4.6	+11.2 / -1.4
Performance among disadvantaged students (bottom quarter of ESCS)	-11.8* / -7.2	-10.5 / -19.9*	-2.9 / -14.7*

Hungary is amongst countries where family background influences learners' achievement most



developing ways schools may reach out to individuals / groups of learners is crucial in order to support equity options



According to Steklacs by today around 25% of adults are functionally illiterate in Hungary

Research Programme for Public Education Development of the Hungarian Academy of Sciences Reading Fluency and Comprehension Research Group, HAS-UP

The aim of the research group is the modernisation and development of the system of teaching reading on the elementary level of Hungarian public education, and that of the systematic concepts and beliefs of elementary school teachers regarding reading via theoretical and practical, empirical, classroom research. According to our credo the most effective pedagogical and methodological examinations start from and end up in the classroom.

UP FHSS researchers:

Leader – Prof. Dr. STEKLACS, János PhD

Members: Dr. habil. BÁLINT, Ágnes PhD

Dr. habil. DEZSŐ, Renáta Anna PhD

MARKÓ, Éva

Dr. habil. MRÁZIK, Julianna PhD

Dr. ZANK, Ildikó PhD



Empirical research

(Sipos et al in progress)

- 21 primary schools / 31 classes / 658 learners – 2nd graders (birth: 02/01/2013 - 08/26/2016, mean: 10/30/2015)
- locations: farm 0.3%, village 25.8%, town 34.8%, city 11.1%, capital 28%
- parental education: completed primary or less 6.3%, vocational 14.8%, GCSE 36.3%, tertiary 41.1% (missing 1.5%)
- participation in organized educational development: none 81.3%, for behavioural difficulties 12.3%, for special educational needs 3.6%, for other: 2.7%
- data collection + examinations: 9 persons, data collection only: 22 persons, examination only: 11 persons
- assessment: 4 primary teachers (prosody, time), 8 speech therapists (mistakes)



Individual assessment sample

(by Demeter, November 2023)

READING TECHNIQUE

1. eye movement is lead by hand, safe direction
2. slow phase due to demand for punctuality
3. mostly syllaby-based reading technique, morpheme-picture based in case of shorter words
4. one consonent change (b-d)
5. occassional missing of phonemes (not many)
6. occassional erratic fluency, common re-start (definable demand for self-correction)
7. segmentation is not always correct
8. hard demand, gets tired while reading outloud

COMPREHENSION:

1. satisfactory on the level of data
2. partial on the level of understanding deeper context (technique requires energy)
ratio of correct answers: 6/10



OECD LEARNING COMPASS 2030



Within the OECD Future of Education and Skills 2030 Project



PTE | BTK

An OECD 2030 Learning Compass Thought Leader's Concept

(1978) & Diener, C. I. "An analysis of learned helplessness: Continuous changes in performance, strategy and achievement cognitions following failure". *Journal of Personality and Social Psychology*. 36 (5): 451–462.

(1983): & Bempechat, J. "Children's theories of intelligence: Implications for learning." In S. Paris, G. Olson, & H. Stevenson (Eds.) *Learning and motivation in children*. Hillsdale, NJ: Erlbaum

(1985): & Legget, E. L. "A social-cognitive approach to motivation and personality". *Psychological Review*. 95 (2): 256–273.

(2000). *Self-theories: Their Role in Motivation, Personality and Development*. Philadelphia: Psychology Press

Mindset. The New Psychology of Success
(Dweck, 2006)

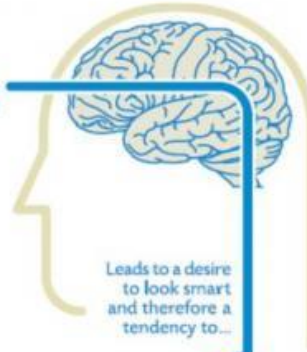


Our own perception of

- ***Intelligence,***
- ***Abilities,***
- ***Skills.***

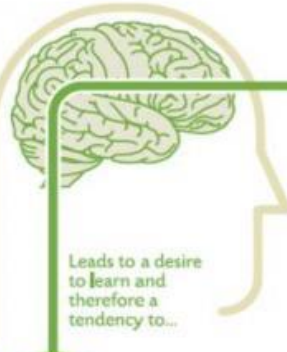
MINDSET = LEARNERS' IMPLICIT
INTELLIGENCE THEORY

Fixed Mind-set
Intelligence is static



Leads to a desire to look smart and therefore a tendency to...

Growth Mind-set
Intelligence can be developed



Leads to a desire to learn and therefore a tendency to...

CHALLENGES

...avoid challenges

...embrace challenges

OBSTACLES

...give up easily

...persist in the face of setbacks

EFFORT

...see effort as fruitless or worse

...see effort as the path to mastery

CRITICISM

...ignore useful negative feedback

...learn from criticism

SUCCESS OF OTHERS

...feel threatened by the success of others

...find lessons and inspiration in the success of others

As a result, they may plateau early and achieve less than their full potential.

All this confirms a **deterministic view of the world.**

As a result, they reach ever-higher levels of achievement.

All this gives them a **greater sense of free will.**

Elison Primary School, Wolstanton, England – Keele University

"Failure is the limit of my abilities"
FIXED MINDSET
"I'm either good at it or I'm not"
"My abilities are unchanging"
"I don't like to be challenged"
"I can only do so well"
"My potential is predetermined"
"When I'm frustrated, I give up"
"Feedback and criticism are painful"
"I stick to what I know"

It's good enough

I will never be as smart as them

I don't get it

I can't make this any better

I'm not good at this

This is too hard

I made a mistake

I give up

I'll keep trying

I am going to try a different strategy

I'm going to learn how to do this

"Failure is an opportunity to grow"
GROWTH MINDSET
"I can learn and improve with challenges"
"Challenges help me to grow"
"My effort and practice increase my abilities"
"Feedback is constructive"
"I like to try new things"

Mistakes help me improve

I can always improve my work

This may take some time and effort

I am going to ask for help

I can always improve

Change Your Mindset



I learn from feedback.

Try Thinking
This may take some time and effort.

Try Thinking
I'm going to work out how they do it.

Try Thinking
I will learn from them.

Instead of Saying
I just can't do this.

This will do.

I can't make this any better.

I made a mistake.

I always do my best.

Try Thinking
I am going to try a different strategy.

Try Thinking
What can I do to improve?



I'm rubbish at this.

Plan A didn't work.

I enjoy challenge.

Try Thinking
★ Now to try Plan B. ★

Try Thinking
Mistakes help me to learn and improve.

Instead of Saying
I'll never do it! It's too hard!

How come my friend can do it?

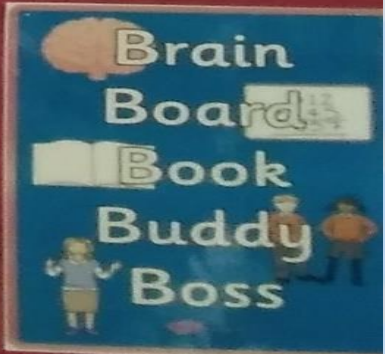


Try Thinking
★ I can always improve my work. ★

Try Thinking
Is this my best work? ★ ☆

Instead of Saying
I'll never be as smart as my friend.

Instead of Saying
I'm not clever enough to do this.



Try Thinking
I will learn how to do this. ★ ☆

10 What Questions
on Developing a Growth Mindset in Children

1. What did you do today that made you think hard?
2. What happened today that made you happy or glad?
3. What did you learn from this?
4. What mistakes did you make that helped you something?
5. What did you do to improve today?
6. What challenge are you going to try today?
7. What will you do to challenge yourself today?
8. What will you do to improve your work?
9. What will you do to improve your friend?
10. What will you do to help this problem?

10 What Questions

to Develop a Growth Mindset
in Children

1. What did you do today that made you think hard?
2. What happened today that made you keep on going?
3. What can you learn from this?
4. What mistake did you make that taught you something?
5. What did you try hard at today?
6. What strategy are you going to try now?
7. What will you do to challenge yourself today?
8. What will you do to improve your work?
9. What will you do to improve your talent?
10. What will you do to solve this problem?



Lessons learnt from international Mindset vs Literacy research

- Hecht, et al, US, 2023: values-aligned intervention fosters growth mindset—supportive teaching and reduces inequality in educational outcomes
- Reid, US, 2020: instilling growth mindset in students changes their perspective on what they believe about their reading abilities and makes them more reflective of their actual ability levels / teachers must believe in all of their students, no matter their current reading ability levels, so that students can believe in themselves
- Petscher et al, US, 2017: a multicultural cluster of elementary school pupils has shown that moderate predictive relations has implications for the malleability of growth mindset related to reading outcomes
- Myers et al, US, 2016: from social cognitive and neuroscientific approach growth mindset was associated with neurological regions thought to be important for error-monitoring
- Claro, et al, Chile, 2016: growth mindset tempers the effects of poverty on academic achievement
- Andersen – Nielsen, Denmark, 2016: successful reading intervention amongst 2nd graders may be introduced based on the growth mindset concept

Future research directions

Based on access to coded participants of reading fluency research

- Investigating pupils' reading mindset
- ? correlation between pupil's performance and mindset ?
- Investigating parental reading mindset
- ? correlation between parental reading mindset, pupils' reading performance / mindset ?
- Investigating educators' pupils-related reading mindset
- ? correlation between educators' reading mindset, pupils' reading performance / mindset ?



Based on research findings and related international good practices

- reading related growth mindset toolkit development for classroom / home education

References

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Steklács János (2023): Szövegértés-felmérésen elért eredmények. Tudományos előadás. *A legfrissebb PISA-felmérések eredményeinek értékelése – az MTA Közoktatási Bizottságának Konferenciája*. Budapest, 2023. december 19. <https://www.youtube.com/watch?v=b3OWbEQS2A4>

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2024 World Population Review <https://worldpopulationreview.com/country-rankings/literacy-rate-by-country>



ACADEMIC / EDUCATIONAL BLOGS

”Reading Horizons”: Developing a Growth Mindset in Struggling Readers

<https://readinghorizons.website/blog/developing-a-growth-mindset-in-struggling-readers>

”MsJordanReads Literacy Resources”: Developing a Growth Mindset for Reading

<https://msjordanreads.com/developing-growth-mindset-reading/>

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THANK YOU FOR YOUR ATTENTION.