

Serena Williams

Marlon Brando

Usain Bolt

Snorri Sturluson

Helen Hunt

Zlatan

Kveikjum neistann!
 Nýjustu rannsóknir á tengslum heila og náms
 Hermundur Sigmundsson

Newton

Björk

Audrey Hepburn

Muhammad Ali

Stephen Hawking

Al Pacino

Halldór K Laxness

Judit Polgar

Astrid Lindgren

Leonardo da Vinci

Jack Nicholson

Caroline Klüft

Einstein

Maradona

Michael Jordan

Magnus Carlsen

Aretha Franklin

Darwin

Chopin

Tom Hanks

HC Andersen

Pele

Francis Galton

Galileo Galilei

Aristoteles (384 f.kr - 322 f.kr)

Dialog -
samtalið



Berkeley
Oxford
Cambridge



Platon (428 f.kr. -
348 f.kr) og
Aristoteles

Van der Meer & van der Weel (2017). Only Three Fingers Write, but the Whole Brain Works†: A High-Density EEG Study Showing Advantages of Drawing Over Typing for Learning

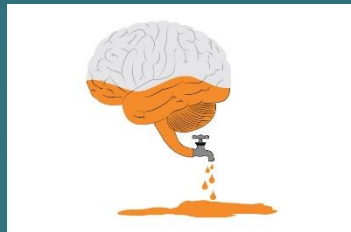
Fókus (´opnar dyr fyrir nám´)

Vinnuminni (´Flöskuháls´)

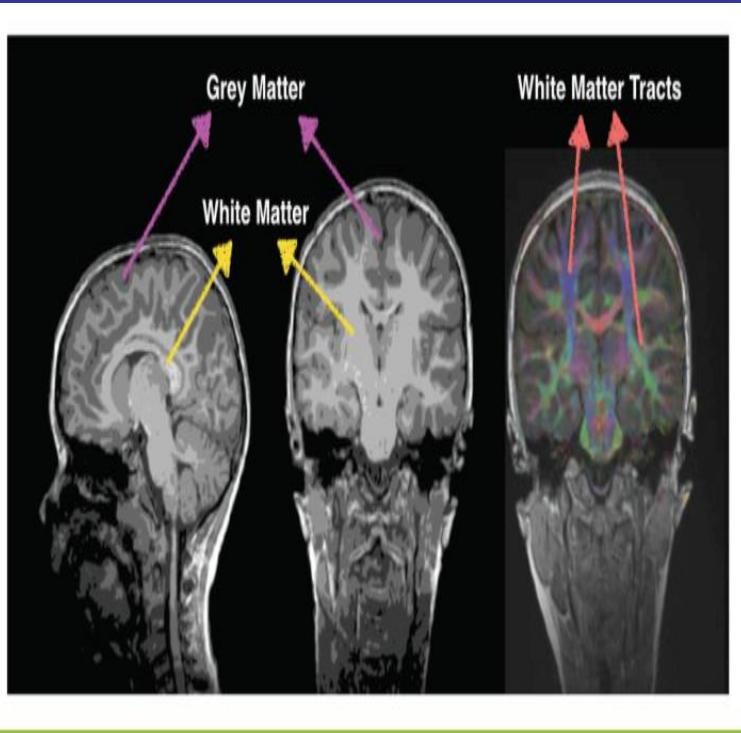
Weird et al. 2016.

Brain Drain: The Mere Presence of One's Own Smartphone Reduces Available Cognitive Capacity

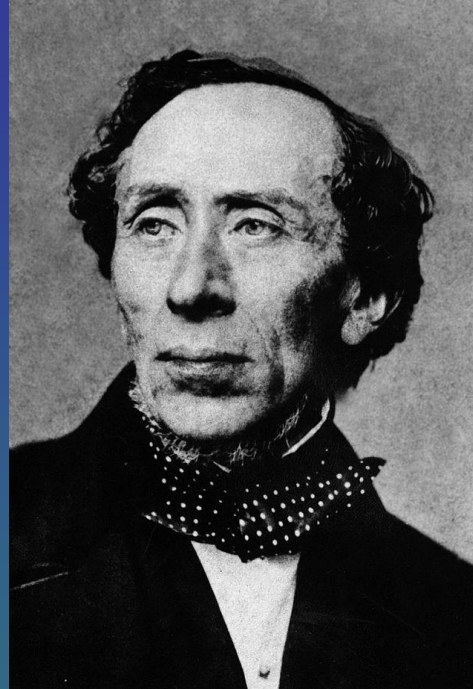
Brain drain



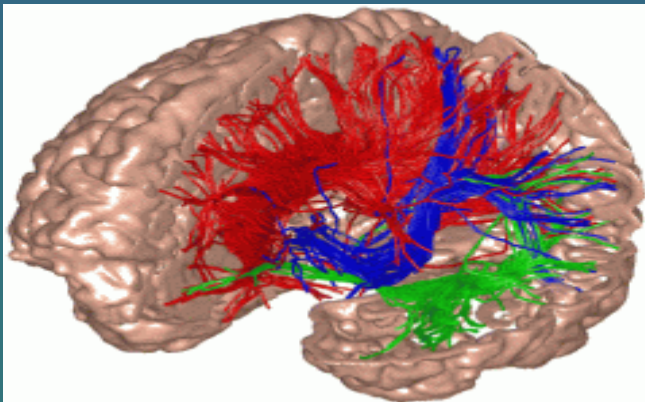
1. Brain and behaviour



2. Expertise



3. Læsi fyrir framtíðina



1. Brain and behaviour

- Stockfish 9 – Elo 3438
- Magnus Carlsen – Elo 2882

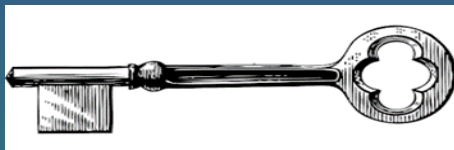


- Robots and football
- Perception/action couplings

Færni/þekking – þarfnast mikillar þjálfunar til að verða góð

CHALLENGE

Sérhæfð þjálfun byggir netverk af taugafrumum „snaga“



Learning to read means organizing neural circuits in our brain

Styrking með einbeitri þjálfun

Heimildir: Edelman, 1987, 1992; Dehaene et al. 2010; Sigmundsson et al. 2017a,b, 2018

Lestur er færni

Magn 'Quantitative'

- *margir litlir snagar*
- Yfirborðsþekking



Gæði 'Qualitative'

- *sumir snagar eru orðnir stórir og sterkir*



- Djúp þekking 'Deep learning'

Snagar: neural network



Skill/knowledge (Færni/þekking)

Skill refers to an action or a task that is carried out voluntarily - with a clear goal or intentions - ÞJÁLFUN

Quantitative changes-new skills

Surface learning II

Qualitative changes- be better at specific skills

Deep learning II

Abilities (Hæfileikar)

Þroski

Vökstur

Erför

One example - the visual system

(Stein & Walsh, 1997) - developmental disorder

Interest - áhugi/ástríða

Gottlieb

Probabilistic Epigenesis

BIDIRECTIONAL INFLUENCES

ENVIRONMENT
(Physical, Social, Cultural)

BEHAVIOR

NEURAL ACTIVITY

GENETIC ACTIVITY

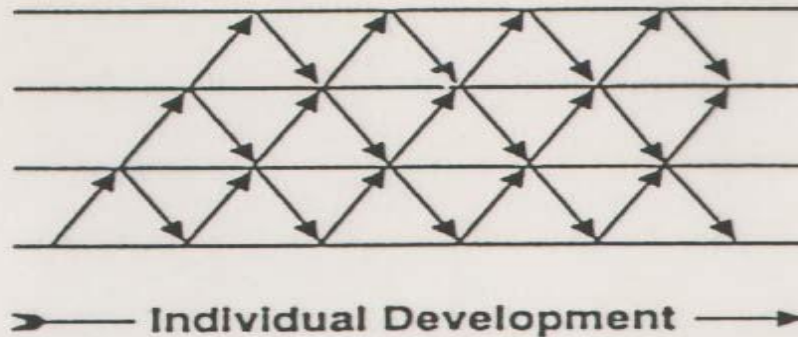


FIG. 8.5. A developmental-psychobiological systems framework. From *Individual Development and Evolution: The Genesis of Novel Behavior* by Gilbert Gottlieb. Copyright © 1991 by Oxford University Press, Inc. Reprinted by permission.

Maturation

(Þroski)

Growth,

(Vökstur)

Experience

(Reynsla)

Learning

(Nám)



Einangrun
taugafruma -
hraði taugaboða

Fjöldi
taugafrumna og
tenginga

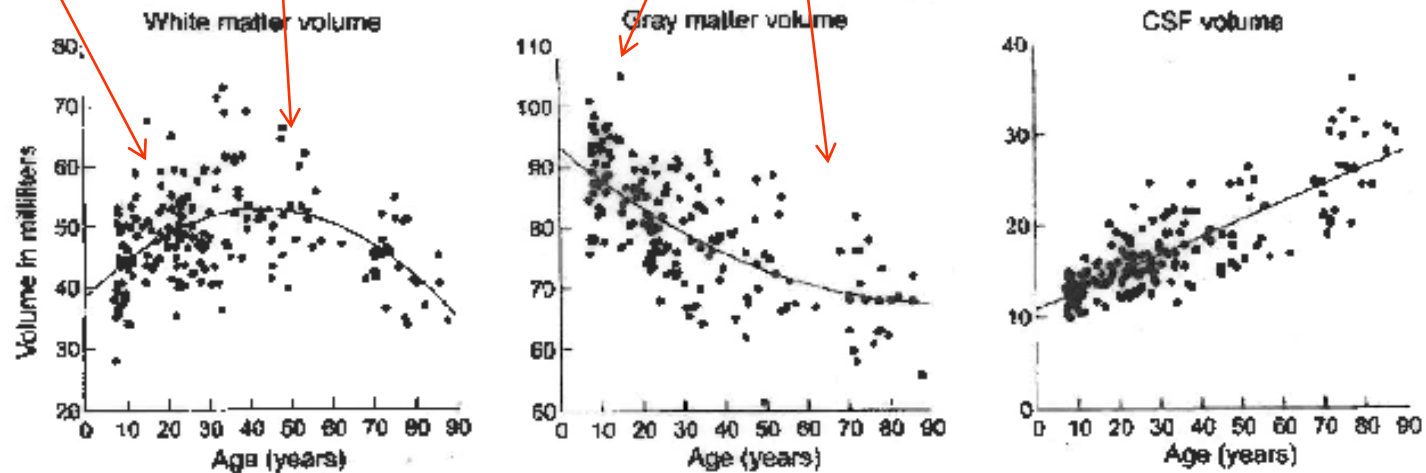


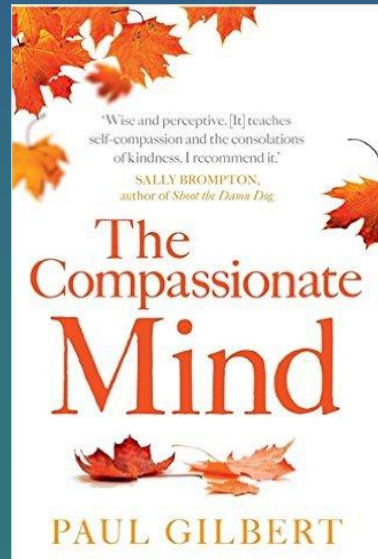
Fig. 6. Volume graphs. Scatterplots of the nonlinear effects of age on total brain white matter, total brain gray matter and total brain CSF volume. Volume in milliliters is shown on the y-axis.

3 faktorer



Hreyfing

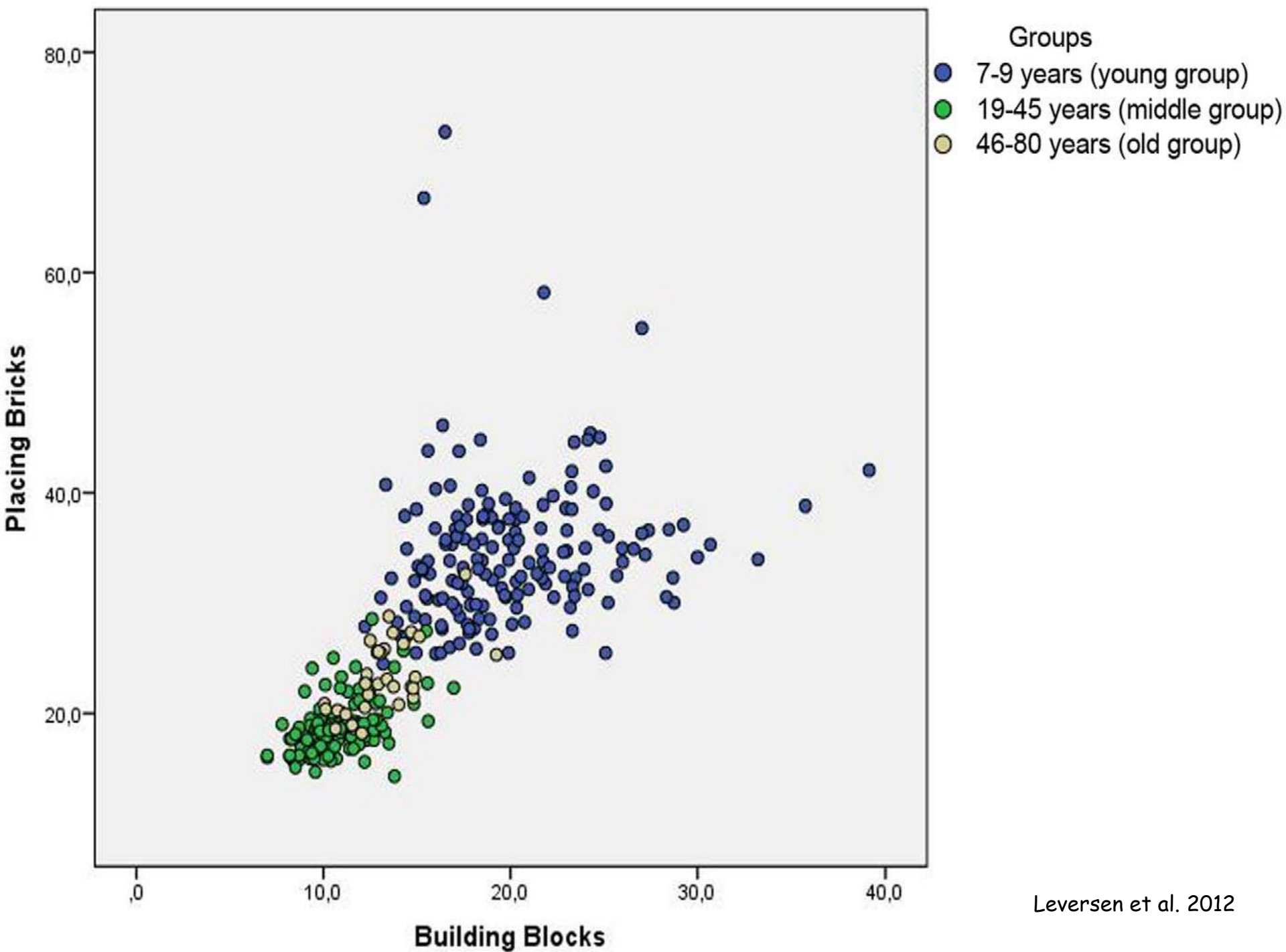
Samvera



Læra nýja hluti

Use it or loose it

Use it and improve it



Edelman



- Neural Darwinism

Practice of a task strengthens the neural network that are used for that particular task



Neural plasticity

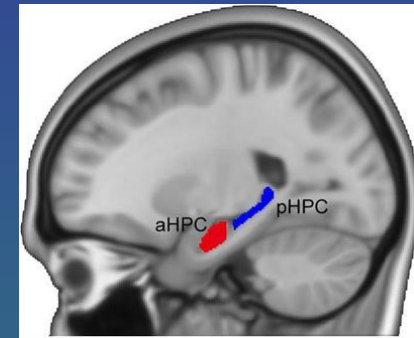
Specificity

Plasticity

- Taxi drivers in London
- Eleanor Maguire, UCL



1 stærri hippocampus (posterior part)
(25.000 götur, radíus frá Charing Cross)



2 stærri en strætóbílstjorarar í London



3 marktækur munur á trainees sem kláruðu námið, miðað við þá sem hættu og kontroll gruppu

Specificity (sérhæfing)



Emperical support for task specificity

Motor skill

Cognitive skill

Servants

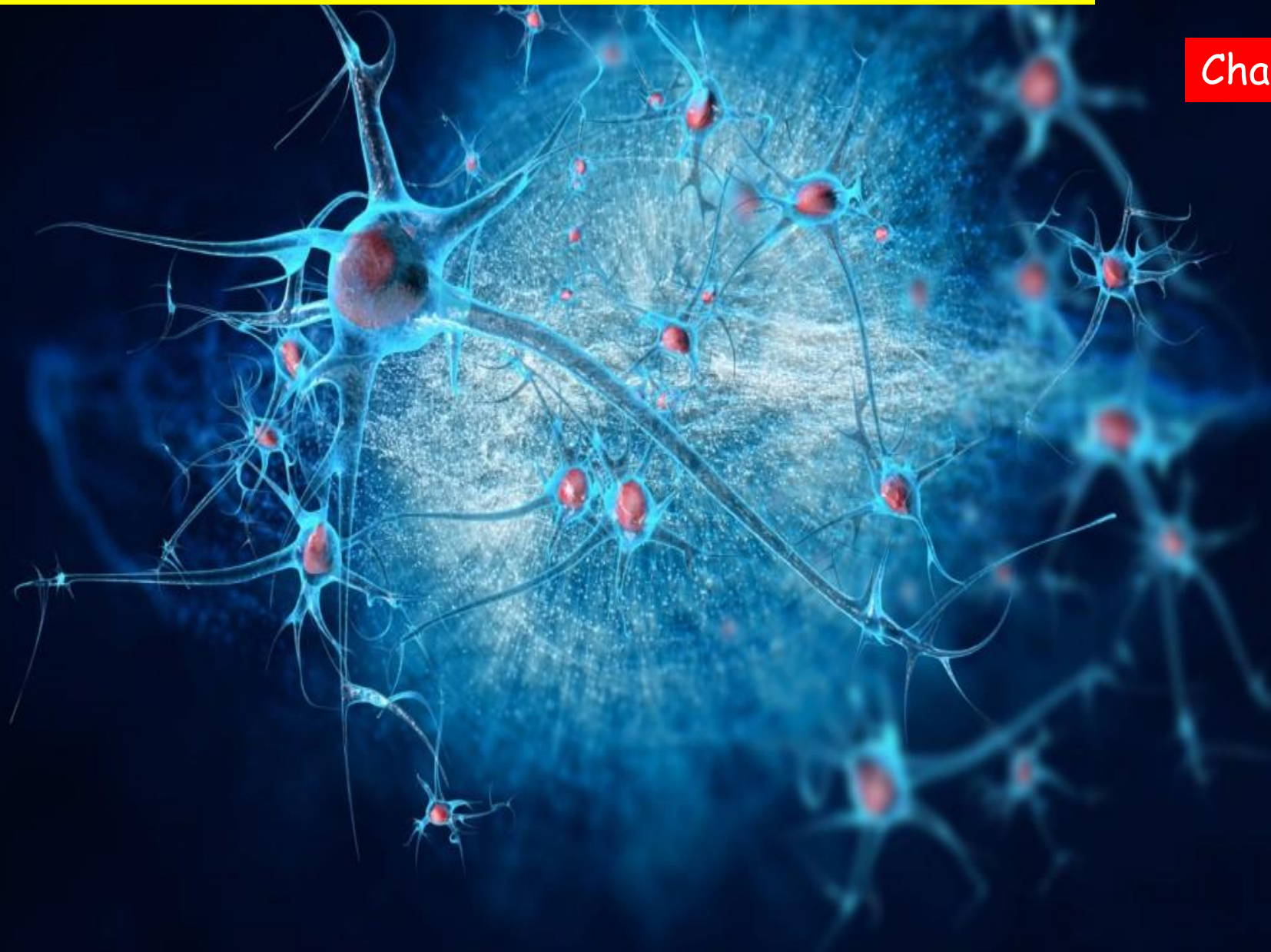
Chess players



Snagar (neural network)

Strengthening
with training

Change



Wolfgang Amadeus Mozart

1756-1791



- Geni
- Pianó og fiðlu
- Perfect tóneyra (perfect pitch)
- Extensive training since he was very young
- 4 year old – lot of training

0-6 ára mjög mikilvægur aldur

Byggja upp snaga

Örvandi og ögrandi umhverfi



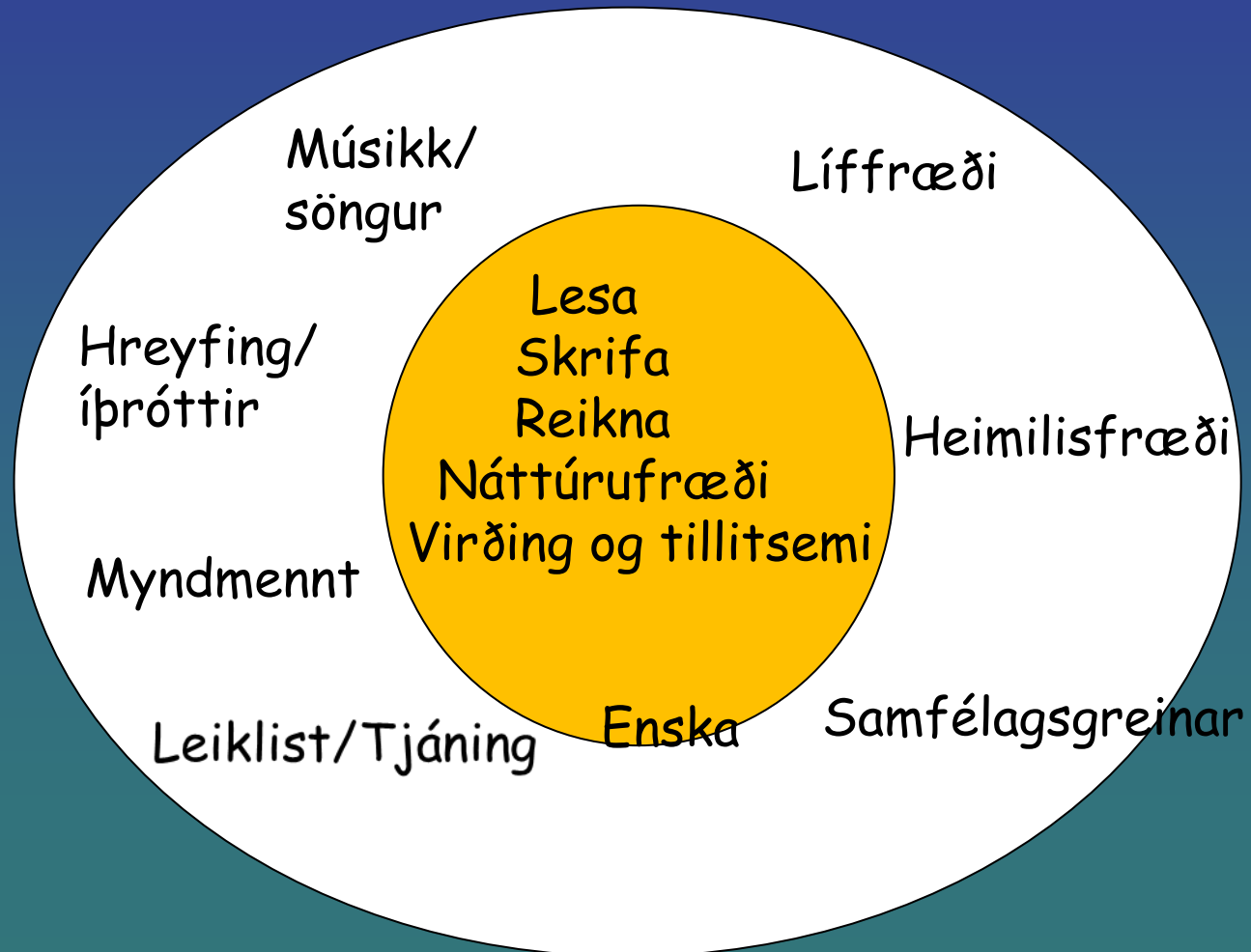
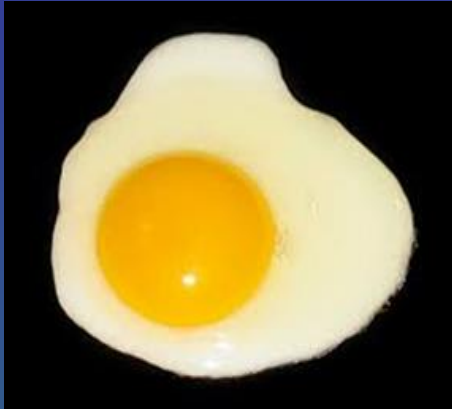
Children whose houses have stairs learn to negotiate them earlier than those whose houses provide no opportunities for them to practice the skill.

Umhverfi - áskoranir



FIGURE 6.8 *At the tender age of 7 months, 29 days, young Parks Bonifay is the youngest person to water ski, according to The Guinness Book of Records. Water skiing is an example of a skill that requires practice to learn.*

Rauðan og hvítan-grunnskóli: 1-7



Sala and Gobet

- Thorndike and Woodworth (1901)
 - near transfer – take place often
 - far transfer – much less common

No far transfer effects

The most effective way to acquire a skill is to train that particular skill

Edelman, Csikszentmihalyi, Ericsson

ERICSSON

- 10.000 hours – the role of **deliberate practice** –
 - purposeful and systematic
 - requires focused attention and is conducted with the specific goal of improving performance
- **Polgárs three daughters – systematic training and daily practice paid off**
- **Susan, Sofia and Judith**





ERICSSON

Building networks

Specificity

Outstanding performance is the product of years of deliberate practice and coaching, not of any innate talent or skill

- The amount and quality were key factors in the level of expertise people achieved
- Consistently and overwhelmingly, the evidence showed that experts are always made, not born

Ericsson et al. 2007

- 6.000 tímar - 13 ára - jafnteflí við Kasparov
- 10.000 tímar - 16 ára - 'verdens elíten'



Mentor

Passion

Grit

Sigmundsson

Náms prosessen

CHALLENGE
LEARNING
PROCESS

– hvaða snaga viljum við byggja upp og gera sterka

Skill Development

Byggja netverk
(snaga)

Sérhæfing

Fókusert þjálfun

Djúp þekking -
stórir/sterkir
snagar

Yfirborðspekking
-margir litlir
snagar

Generalisation of the Skill

Automatisation of the Skill

Acquiring and Refining the Skill

Understanding the Skill

Learning process

Sigmundsson et al. 2017

Sigmundsson Learning principles

- A review of intervention methods – general principles for teaching (Sigmundsson et al. 1998)

(1) Intensive – daily sessions

Kleim and Jones (2008):

- Use it or lose it: failure to drive specific brain functions can lead to functional degradation
- Use it & improve it: Training that drives a specific brain function can lead to an enhancement of that function
- Specificity: The nature of the training experience dictates the nature of the plasticity
- Repetition matters: induction of plasticity requires sufficient repetition
- Intensity matters: induction of plasticity requires sufficient training intensity



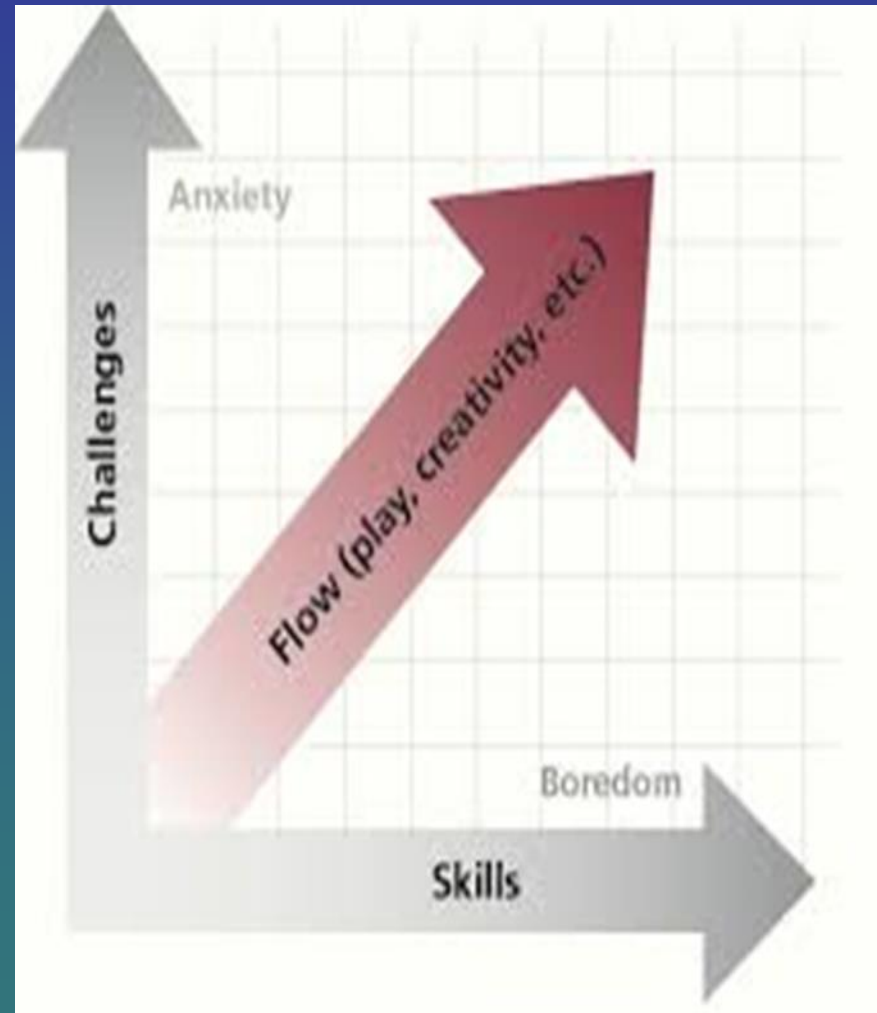
Learning principles

Góður
kennari/þjálfari/mentor
gegnir lykilhlutverki

- (2) The level of difficulty is set so the person can manage the task
- (3) Positive feedback
- (4) Selfmonitoring

Réttar áskoranir

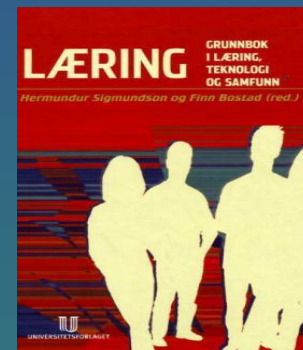
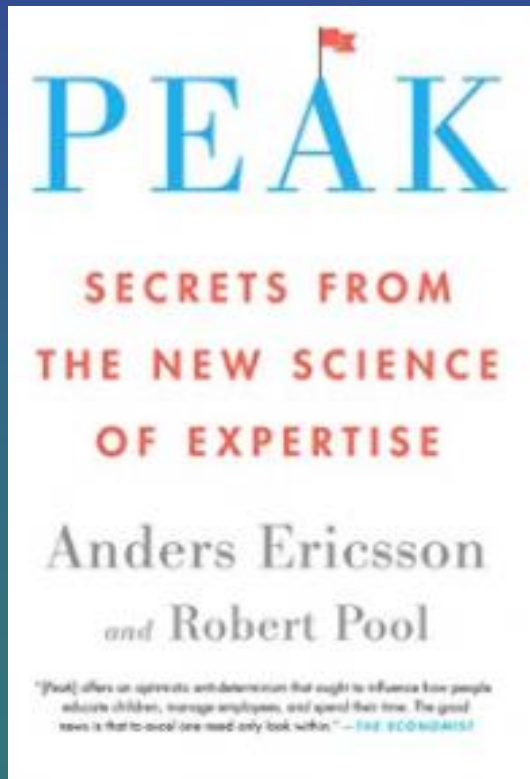
Eftirfylgni



(Csikszentmihalyi, 2008)

What is trained develops!

Training with focus

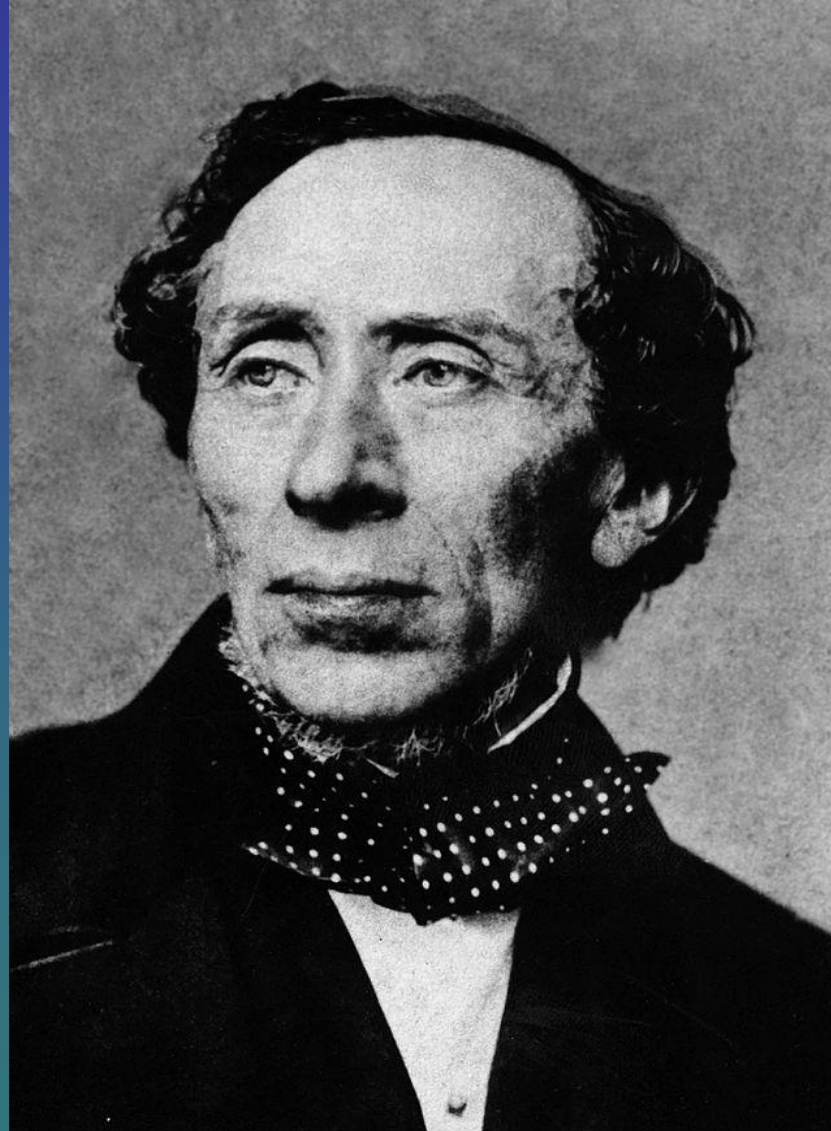


Ericsson m.fl. (2007). Making of an expert

Sala and Gobet (2017). Does far transfer Exist?

Sigmundsson et al. (2018). What is trained develops!

2. Expertise



H.C. Andersen



- 1805-1875
- Hans Andersen, Anne Marie Anders
- Poor family – complete lack of privacy – develop his unique imagination and love of stories
- Father work bence – many books and songs
- **Playing theater/creating drama**
- Went to school occasionally – memorizing stories – would retell stories to anyone who would listen
- His father influenced his interest in Theater and Culture
- His most famous stories), Keiserens nye klær (1837), Den stygge andungen (1943), Piken med svovelstikkene (1845)

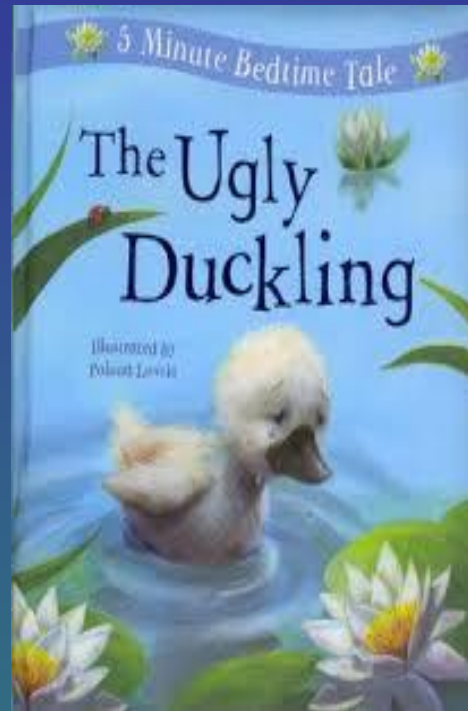
H.C. Andersen



Hans systir

2-3 ára

Snagar



Hans líf

7-8 ára

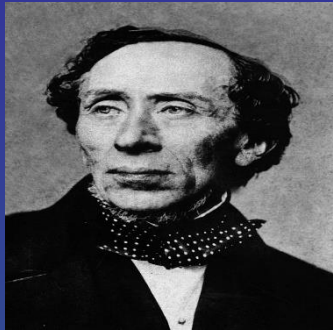
Snagar



12 ára

Snagar

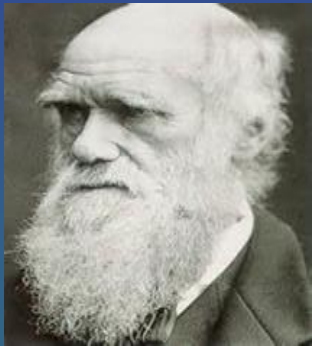
Gefin út janúar 2020



HERMUNDUR
SIGMUNDSSON (RED.)

EKSPERTISE

UTVIKLING
AV KUNNSKAP
OG FERDIGHETER



Intensity
matters

Grit

Use It and Improve It

Passion (ástríða)

an extreme interest in or wish to do something

Interest

Positive
feedback

A strong feeling of enthusiasm or excitement for something or about doing something

Training

Skill

Ability

Mindset

Specificity

Flow

Repetition
matters

Curiosity

Motivation

Focus

Deliberate
practice

Challenges

Intensity

Use It or Loose It

Knowledge

Training

Passion

Grit (þrautseigja)

courage and determination despite difficulty

The perseverance of effort

Resilience - seigla

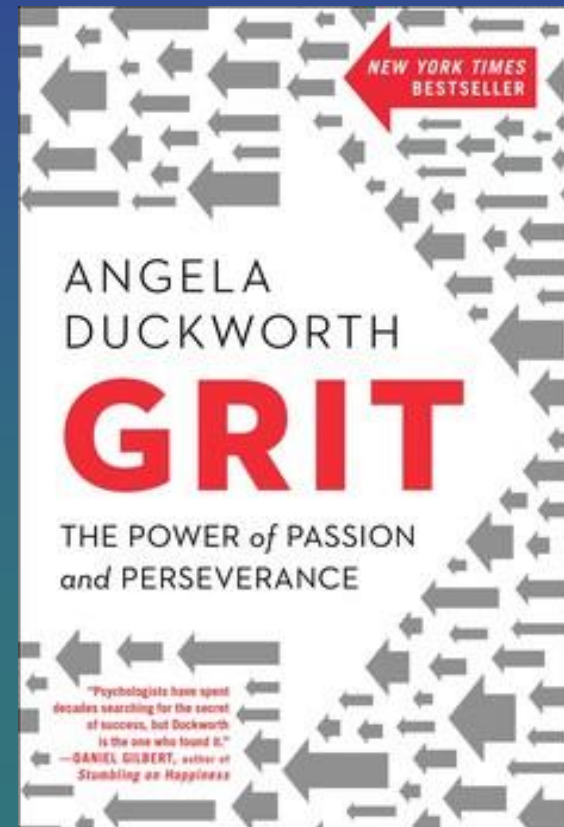
Conscientiousness - samviska

Courage - hugrekki

Endurance - þrek

Strength - styrkur

Passionate - ástríðufullur



Mindset (hugarfar)

A persons way of thinking and their opinions

How can we learn to fulfill our potential

Growth mindset drives motivation and achievement

Believe that they can learn anything if they put in the work, practice and effort to learn it

I can get smarter

Learning is my goal

Effort makes me stronger

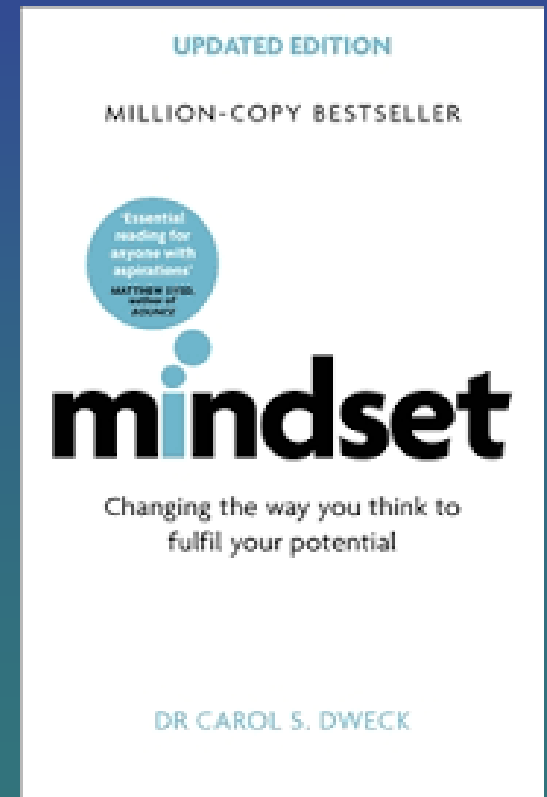
I´ would spend more time and work harder

Higher achivement

Training

Passion

Grit





The passion scale: Aspects of reliability and validity of a new 8-item scale assessing passion.



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ARTICLE INFO

Keywords:
Assessment
Passion
Grit
Achievement
Goal
Area/theme/skill
Reliability
Validity

ABSTRACT

In this article, the psychometric properties of a new scale aimed at quantifying passion are explored, i.e. passion related to becoming good or achieving in some area/theme/skill.

The Passion Scale was designed to be quantitative, simple to administer, applicable for large-group testing, and reliable in monitoring passion.

A total of 126 participants between 18 and 47 years of age (mean age = 21.65, SD = 3.45) completed an assessment of Passion Scale, enabling us to investigate its feasibility, internal consistency, construct validity and test-retest reliability.

Feasibility: The overall pattern of results suggest that the scale for passion presented here is applicable for the age studied (18–47).

Internal consistency: All individual item scores correlated positively with the total score, with correlations ranging from 0.51 to 0.69. The Cronbach's alpha value for the standardized items was 0.86.

Construct validity: Pearson correlations coefficient between total score passion scale and Grit-S scale were 0.39 for adults, mean age 21.23 (SD = 3.45) (N = 107).

Test-retest reliability: Intraclass correlation coefficient (ICCs) between test and retest scores for the total score was 0.92.

These promising results warrant further development of the passion scale, including normalization based on a large, representative sample.

1. Introduction

'Don't just fill the basket, but light the fire'

When becoming very knowledgeable about or skillful in a particular area, there is no doubt about the importance of training and experience (Thelen & Smith, 1994). In this respect, Ericsson, Prietula, and Cokely (2007) point out that experts are always made, not born. The authors further argue that to become an expert you need deliberate practice over several years, or 10,000 h of focused training. In this context, one could argue that to become expert you need a lot of training through many years in the area you want to be expert in (Ericsson & Charness, 1994; Ericsson et al., 2007; Sala & Gobet, 2017; Sigmundsson, Trana, Polman, & Haga, 2017).

Which factors make some individuals willing to practice and train enough to become experts? When analyzing what characterizes

individuals who can be said to be experts, *passion* (much interest) for the area you are going to be expert in are of importance (Sigmundsson & Haga, 2019). As Curran, Hill, Appleton, Vallerand, and Standage (2015) point out, passion provides the psychological energy underpinning engagement in valued activities. You also need to have *grit* or perseverance to be able to carry out so much practice for such a long time (Duckworth, 2016). *Growth mindset* is probably an important underlying cognitive factor for grit and passion (Dweck, 2017). In addition, the importance of follow-up and support from a good mentor/teacher or trainer for the person is indisputable (Ericsson et al., 2007). For an overview of these factors, see Fig. 1.

1.1. Passion

Passion can be explained as an intense desire or enthusiasm for

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Intensity matters

Use It and Improve It

To become experts

Interest

Training with focus. What factors are important for being able to train a lot

Positive feedback

Passion. Much interest in the theme you are working on

Training

Grit. Great will/perseverance to reach the goals you set

Ability

Mindset. Important to have a growth mindset

Follow up/significant others. Good teacher/trainer/mentor

Curiosity

Specificity

Flow

Repetition matters

Motivation

Focus

Skill

Challenges

Intensity

Use It or Lose It

Deliberate practice

Knowledge

Achievement



Direction of the arrow: passion

Strength and size of the arrow: grit

Passion, grit and mindset

Passion (ástríða)

- Karlar 4.19
- Konur 4.03
- marktækur munur milli kynjanna

N=146

Age: 22.01

Grit (þrautseigja)

- Karlar: 3.52
- Konur: 3.53

Mindset (growth) (grósku hugarfar)

- Karlar: 4.28
- Konur: 4.40

Konur

	Passion	Grit	Mindset (growth)
Passion	1	.325**	.322**
Grit		1	.350**
Mindset (growth)			1

Karlar

	Passion	Grit	Mindset (growth)
Passion	1	.552**	.160
Grit		1	.175
Mindset (growth)			1

Passion -gender differences

Passion (ástríða)

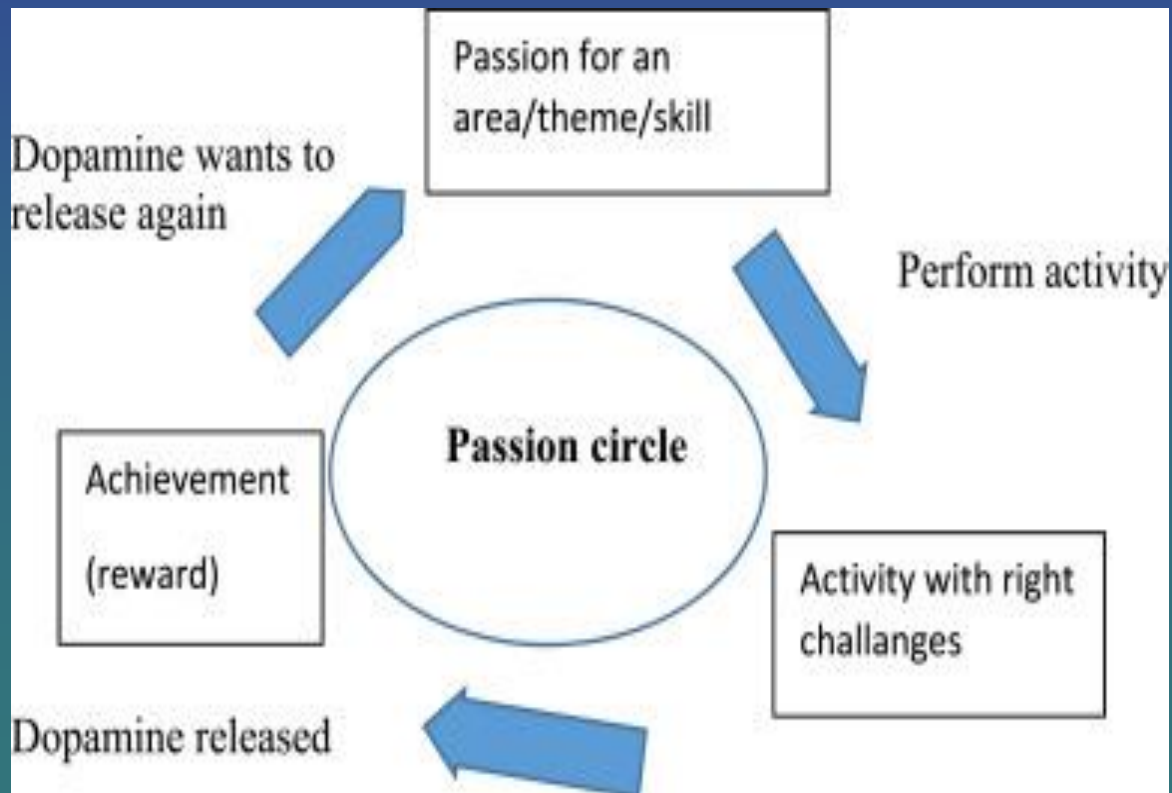
- Karlar 4.12

- Konur 3.86

-marktækur munur milli kynjanna

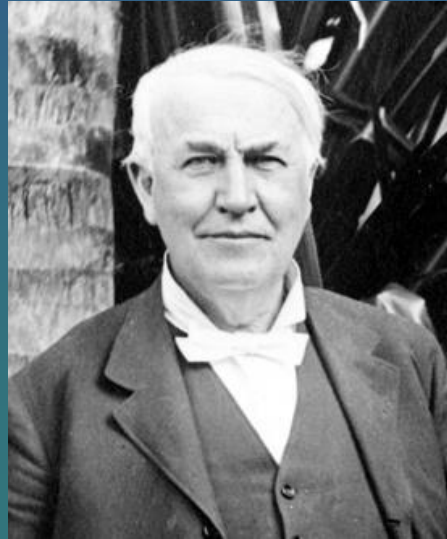
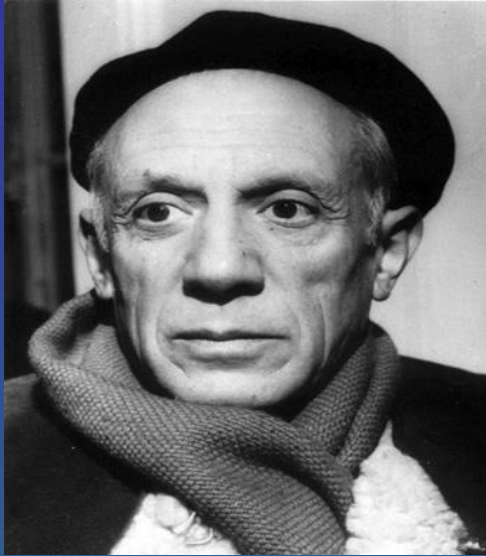
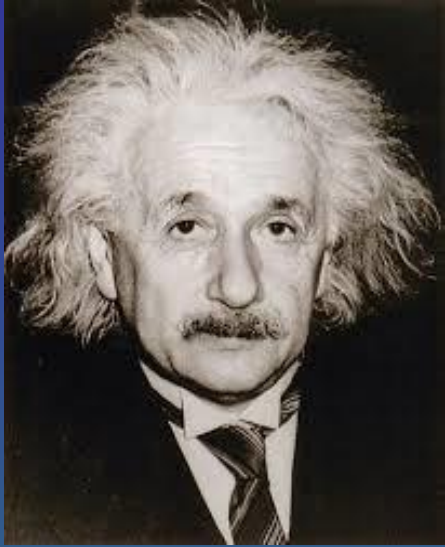
N=917

Age: 14 to 77



Dopamine system -
learning, attention,
reward

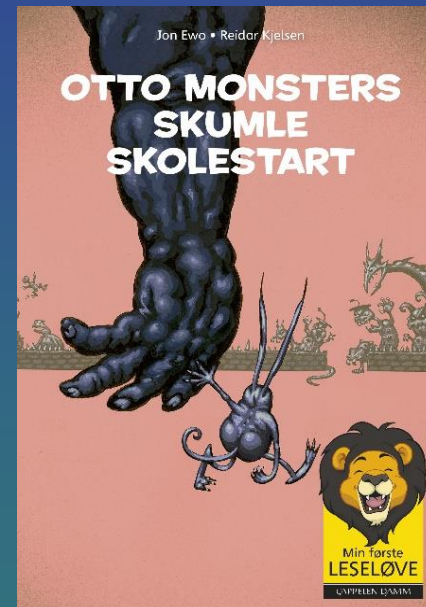
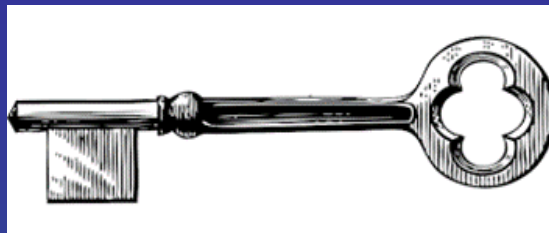
Passion

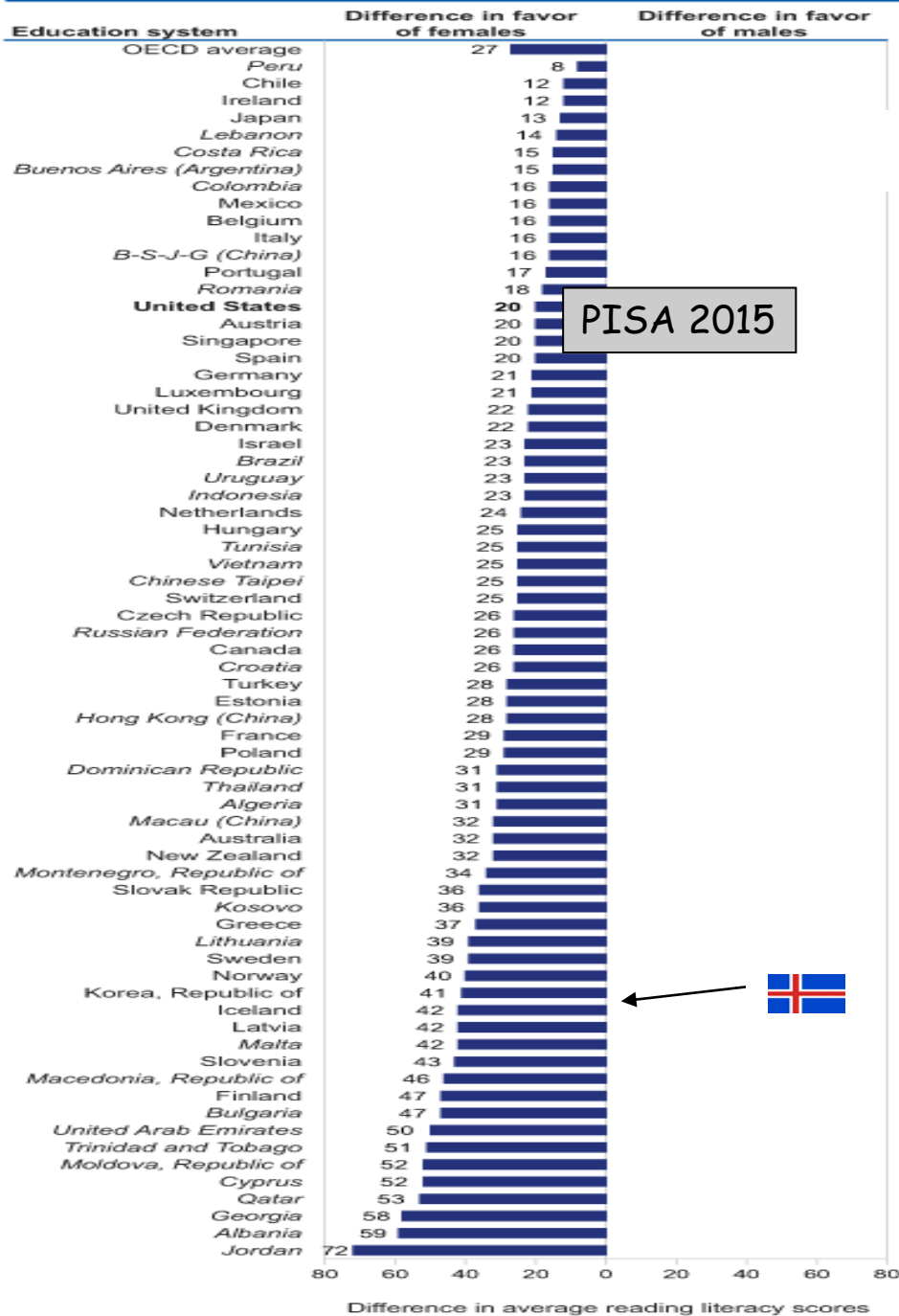


Passion



3. Lestur





PISA 2015



- Frá fæðingu: Talað minna við drengi
- 10 mánaða: Drengir babbla minna en stúlkur
- 5-6 ára kynjamismunur í bókstaf-hljóða kunnáttu
- Bókstaf-hljóða kunnátta: Kynjamismunur helst í gegnum 1 bekk
- 11% kunna að lesa í byrjun 1 bekkjar, 70% stúlkur
- 27% kunna ekki að lesa í lok 1 bekkjar, 70% drengir
- Drengir minni áhuga fyrir lestri
- Drengir lesa minna
- Fátækt hefur meiri áhrif á námsárangur drengja
- Að búa með einstæðu foreldri hefur meiri áhrif á námsárangur drengja
- Ástríða, þrautseigja, grósku hugarfar

OECD, 2016; Sigmundsson et al. 2017, 2018



Möguleikar – Brjóta lestrarkóðann:

nota rétta aðferðafræði í byrjendakennslu: bókstaf-hljóð aðferð

CHALLENGE
LETTER-SOUND
KNOWLEDGE

Stutt af fremstu vísindamönnum á sviði heila og lestrar:

Stanislas Dehaene (Inserm)

Joel Talcott (Aston University)

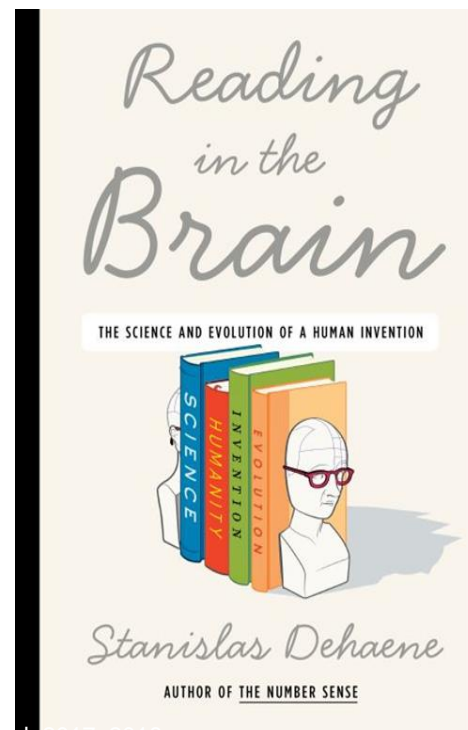
Finn Egil Tønnesen (Universitet i Stavanger)

Stutt af stórum rannsóknum:

Samanburðarrannsóknir

Stutt af okkar eigin rannsóknum:

Þegar barnið kann að meðaltali 18-19 bókstafi nær það að brjóta lestrarkóðann – sem sagt að lesa



Möguleikar – Brjóta lestrarkóðann

CHALLENGE
THE TEACHER

Stutt af framúrskarandi kennurum



Sidsel Skaalvik, kennari í barnaskóla 18 ár
Prófessor í sérkennslu við NTNU



Greta Storm Ofteland, kennari í barnaskóla 45 ár
Próaði bókstaf-hljóð prófið

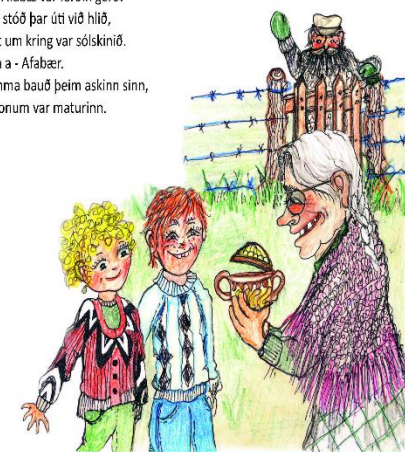


Herdís Egilsdóttir, kennari í barnaskóla í 45 ár
Hefur gert margar bækur fyrir börn



A a

Anna fór með Ara í ferð,
að Afabæ var ferðin gerð.
Afi stóð þar úti við hlið,
allt um kring var sólskinið.
A a - Afabær.
Amma bauð þeim askinn sinn,
í honum var maturinn.



Myndir og orð - benda á myndina og spyrja:
Hvar er?
askur - Anna - Ari - amma - afi - Afabær

ORIGINAL RESEARCH
published: 08 September 2017
doi: 10.3389/fpsyg.2017.01539

Check for updates

Letter-Sound Knowledge: Exploring Gender Differences in Children When They Start School Regarding Knowledge of Large Letters, Small Letters, Sound Large Letters, and Sound Small Letters

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INTRODUCTION

The four most prominent communication skills to children's intellectual, emotional and social developments are speaking, listening, reading, and writing (Rose, 2006). Students failing to acquire basic reading skills in early grades have greater risks of academic shortcomings and problematic behavior later on Adams (1990), Elbaum et al. (2000), and Tennessen and Uppstad (2015). Large scale academic assessments such as PISA and PIRLS have shown a large gender gap in reading (Mullis et al., 2012; Støet and Geary, 2013; OECD, 2014).

Phonological awareness is considered as an important enabling skill in reading and writing. In general, there has been little attention to gender differences in phonological awareness, however, studies have found that girls perform superior compared to boys at the age of 6 years (Lundberg et al., 2012).

Girls tend to have better achievements in reading (Støet and Geary, 2013). More specifically, gender differences in vocabulary growth (Huttenlocher et al., 1991), letter writing scores (Purani et al., 2013) and word recognition (Samuels and Tunnare, 1974) have been found among children in preschool and first grade. These differences might have an accumulating effect in academic achievement throughout elementary school (Mullis et al., 2012; cf. OECD, 2014). Girls at age 15

in Psychology

Gender Gaps in Letter-Sound Knowledge Persist Across the First School Year

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INTRODUCTION

Literacy is one of the main goals of primary education and is attained predominantly through reading, writing, speaking and listening (Rose, 2006). All of these domains facilitate children's intellectual, emotional and social development. A lack of basic reading skills at a young age is later associated with behavior problems and academic shortcomings (Adams, 1990; Elbaum et al., 2000; Tennessen and Uppstad, 2015). At its most fundamental level, reading involves connecting vision to sound and attaching semantics toward these units of communication. Achieving a sufficient level of awareness and automaticity in reading requires a systematic knowledge of phonemes, i.e., knowing the sound of each letter in the alphabet (Hulme et al., 2012; Tennessen and Uppstad, 2015).

Importance of Letter-Sound Knowledge for Reading Development

Literacy has a profound impact on the human brain (Dehaene, 2011). Recent brain imaging studies have identified specific locations in which symbols, such as letters, are processed. The importance of the visual word form area (VWFA) in the left lateral occipitotemporal sulcus is hypothesized to play a crucial role in human's processing of letters and words (Dehaene et al., 2002; Dehaene and Cohen, 2011). Dehaene and colleagues contend that the most influential factor for learning how to read is the attachment of meaning to symbols, of which letters and phonemes are the most crucial building block. In evolutionary terms, reading is a relatively novel invention that relies on our finely

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Breaking the reading code: Letter knowledge when children break the reading code the first year in school

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ABSTRACT

The aim of this study was to examine when children learn to read and how learning to read depends on a foundation of alphabetic knowledge. 356 children aged 5–6 years completed assessments of letter-sound knowledge, i.e. the names and sounds of uppercase and lowercase letters of the Norwegian alphabet. Each child was tested at the start, the middle and the end of the school year. The time that each child broke the reading code was also recorded. The results indicated that 11% of the children knew how to read before starting school and 27% of the children did not learn to read by the end of the first year. The remaining children typically knew 21 uppercase letter sounds before they were first able to read, and only a few (<5%) knew less than 11 uppercase letter sounds when they broke the reading code. The average of all four letter-scores at the time they broke the reading code was 19 ± 5 letters (mean ± standard deviation). Although letter sound knowledge was associated with the ability to read, it was not sufficient for breaking the reading code. 40% of children who knew 23 letter sounds or more, enough to read more than 80% of the most common Norwegian words, and 15% of children who knew all 29 letter sounds still could not read. Based on these data, it seems reasonable to advocate learning letter-sound correspondences early in the first year of school to form the best possible basis for breaking the reading code.

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1. Introduction

Letter-sound knowledge has been found to be one of the most important factors for reading development (Bradley & Bryant, 1983; Dehaene, 2011; Efrat, Nunes, Stahl, & Willows, 2001; Nation, 2019; Solheim, Frieters, Lundeberg, & Uppstad, 2018; Sundt, Furnes, & Lundstrøm, 2019; Tennessen & Uppstad, 2015). Dehaene (2011) argues that letter-sound correspondences must be systematically taught, one by one and that the amount of such teaching is the best predictor of reading performance (p.26).

Research indicates gender differences in letter-sound knowledge when children enter school. When measuring the number of uppercase letter names, uppercase letter sounds, lowercase letter names and lowercase letter sounds that children know, girls knew significantly more letters than boys (Sigmundsson, Eriksen, Oftealand, & Haga, 2017, 2018). This may be one of the reasons for

the gender gap in reading shown in large scale academic assessment studies such as Programme for International Student Assessment (PISA) 2015 in 15-year-old children (OECD, 2016). Based on current evidence, development of letter-sound knowledge seems to be a matter of dynamic interaction between nature and nurture, in the sense of a multicausal explanation (Støet & Geary, 2013). This multicausal explanation may be related to both biological factors (Huttenlocher et al., 1991) and socio-cultural factors such as social - cognitive processes in which girls are advantaged (Geary, 2010). Gough and colleagues proposed a simple skill is dependent on both decoding and comprehension (reading = decoding x (linguistic) comprehension) (Gough & Tunmer, 1986; Hoover & Gough, 1990). From this perspective, "Decoding is clearly not sufficient for reading. But at the same time, we argue that decoding is necessary for reading, for if print cannot be translated into language, then it cannot be understood" (Gough & Tunmer, 1986, p. 7). Nation (2019, p. 48) argues that

Það sem þarf að gera

1. Eflum hreyfingu 60 mín á dag börn. Fullorðnir 30 mín á dag
2. Eflum samveru - gefum okkur tíma
3. Lesum fyrir börn frá unga aldri
4. Tala við börnin, ekki gleyma strákonum - gefa sér tíma
5. Kennum bókstafi /þeirra hljóð.
6. Vinnum með að setja saman 2 og 2, 3 og 3 bókstafi.
Draga saman orð, skrifa orð. Bæði leikskóli/ grunnskóli
7. Útivist - gönguferðir - fjöru ferðir



Það sem þarf að gera

8. Skólinn – forgangsráða –vinna með lestur fyrstu 1-3 árin í skólanum
9. Breyta skípulagi skóla dagsins. Byrja með hreyfingu, 60 mín, fyrir öll börn í barnaskóla
10. 'Leksehjelp' í skólanum fyrir þau sem fá ekki hjálp heima
11. Nótum bókstaf/hljóð aðferð þangað til barnið hefur brotið lestrar kóðann
12. Vinnum með áskoranir

Áskoranir fyrir okkur

Vinnum að því að stoppa leshraðamælingar í því magni sem þær eru framkvæmdar í núna

Erum að prófa 40.000 börn/unglínna 3 sinnum á ári. Samtals 120.000 mælingar.

Börn/fullorðnir finna þann hraða sem passar þeim. Mælum frekar breytur sem skipta höfuðmáli sem er að brjóta lestrarkóðann (kunna að lesa) og lesskílningur



Streita/kvíði

Minni áhugi
á lestri

Sem veldur
minni þjálfun

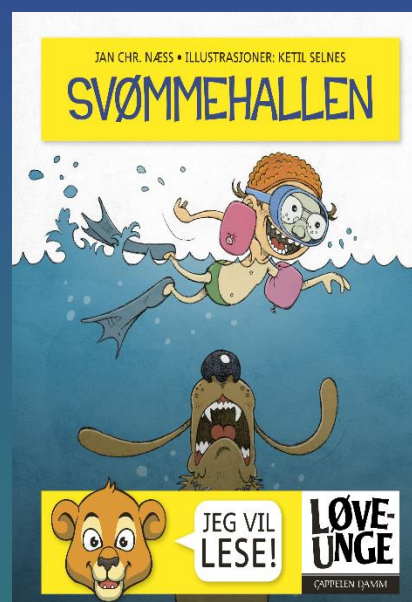
Dear Hermundur,
I have no knowledge concerning any plans to assess reading of children in Finland. If I had power to propose what could be an appropriate target for assessment (which naturally affects the behavior of children) it would be something like

"How many books you have read during the last month?" And then
"List the names of the three you found most interesting!"

Best,
Heikki

Áskoranir fyrir ykkur

- Vinnum að því að fá réttar bækur inn í skólann – 11 erfiðleikastig



Girls enjoyed reading more than boys

Boys liking comic - humorous books

Girls enjoyed adventure books

Hver bókaútgáfa hefur 20 bækur á hverju stigi, samtals 220 bækur

SKRIFA

L L _ _ _ _ _

Ó Ó _ _ _ _ _

E E _ _ _ _ _

/15

FYLLA INN Í

Ó_ I Á BÍ_

LÁS_ E_ S_ Ó_

A_DR_A E_ ST_LT

/10

TEIKNA/LITA

AFI

ÍS

LAMB

LESA

HÚS ER STÓRT

LÁSI ER INNI

GRÝLA ER GÖMUL

/9

REIKNA

$9 - _ + 1 = 9$

$3 + _ = 8$

$4 - 3 =$

/3

PRIKK TIL PRIKK/LITA

SKRIFA

A A A A A A A A A
H H H H H H H H H
F F F F F F F F F
F F F F F F F F F

~~RIKNA~~ 4-3=1
2+4=6 5-2=3
2+3=5 2x2=4
5+2=7 2x3=6
5+5+5=15
2+2+4=8

LEST

ÉG SÁ HANA
HANA ER SLÖK
ANDREA ER GÓÐ
AFU ER HESS

ÉG SÁ HEST
ERTU GÓÐ Í FÓLBOLTI
HESTUR ER STÖR
JONA ER SÖBGLAÐI

TEIKNÁ

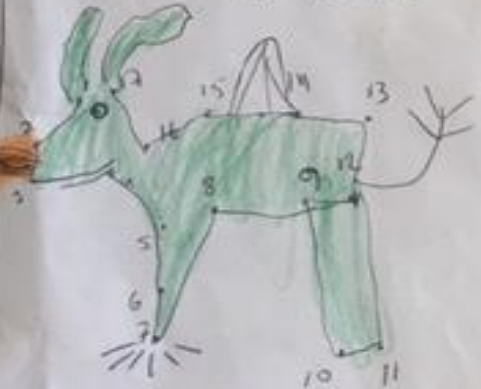
HÚS



ANDREA



PRIKK TIL PRIKK



KVALUR



KEST



Læsi til framtíðar – með markvissu átaki er hægt að bæta lestrarfærni gífurlega

CHALLENGE
KNOWLEDGE



Brjóta lestrarkóðann – læra að lesa

- Kynna mikilvægi bókstaf-hljóð aðferða í öllum skólum landsins og hvernig kennarar vinna með þá aðferð
- Gefa út kennslumyndband fyrir kennara hvernig aðferðin er kennd



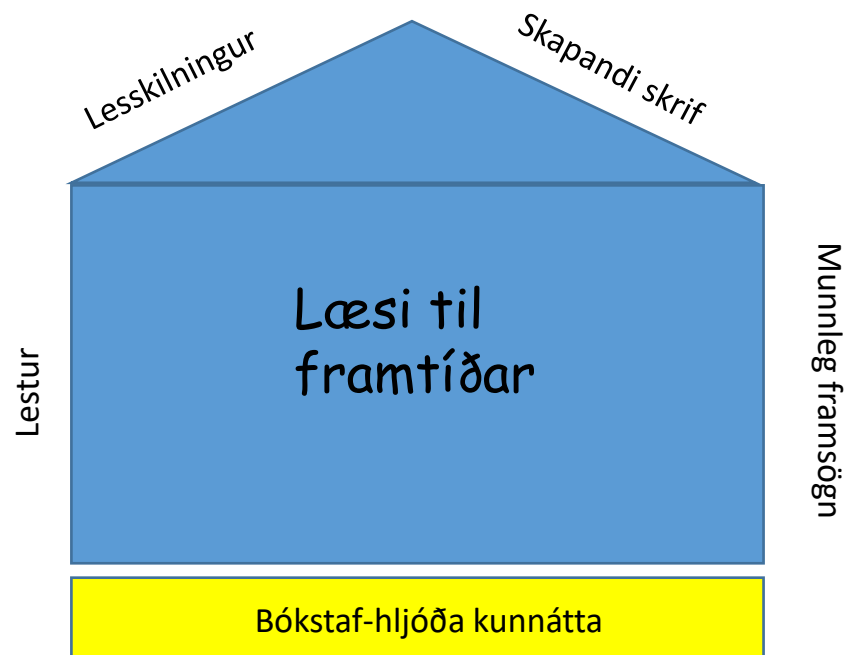
Skapa áhuga: Áskorun miðað við færni. Útbúa lestrarbækur með mismunandi erfiðleikastig. Hvert stig hefði 15-20 bækur

- Bókasöfn: skemmtilegar bækur fyrir börn og unglinga. Bæta skólabókasöfnin



Meiri þjálfun – samfélagslegt verkefni – gefa okkur tíma

- Bókasöfn: Fræðisetur: setja í gang fræðisetur um lestur (rannsóknir, kennsla, miðlun)



Pekking fyrir betra samfélag

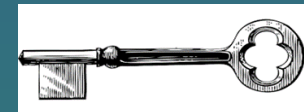
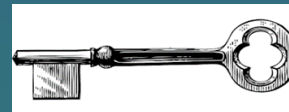
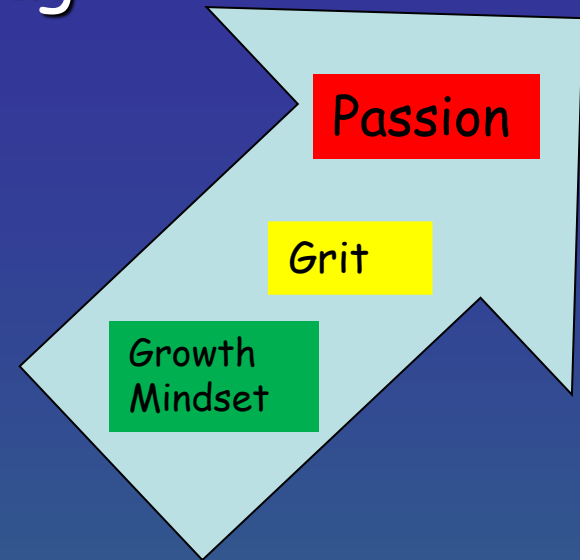
Meiri þjálfun: Þjálfun með fókus/endurtekningar -
skapar netverk af taugafrumum - snaga -
samfélagslegt verkefni - gefa okkur tíma

Skapa áhuga

Áskoran - áskoran miðað við færni
Finna hvar hver einstaklingur stendur og gefa honum
réttar áskoranir

Eftirfylgni - 'monitor your progress'
Verðum að vita nákvæmlega hvar við stöndum til að geta gefið
réttar áskoranir

Góður kennari/þjálfari/mentor
- áskoranir
- eftirfylgni



Hreyfing

Samvera

Lærum
nýtt



Takk fyrir. email: hs@ru.is