

Læring og ferdighetsutvikling: barne-og ungdomsidrett på Island

Hermundur Sigmundsson
Department of Psychology,
Norwegian University of Science and Technology
Háskólinn í Reykjavík





Foredraget

- Teorier
 - Skill/ability (ferdigheter/evner)
 - Probabilistic Epigenesis (Gottlieb, 1998)
 - Neural Darwinism (Edelman, 1987, 1992)
 - Learningprocess (Henderson & Sugden, 1992)
 - Learning principles (Sigmundsson et al. 1998)

Barne-og ungdomsiddrett på Island

Konklusjon

Viktige begrep

Utvikling (development)

Modning (maturation)

Læring (learning)

Ferdigheter (skills)

Evner (ability)





Development - Ecological psychology

'Development is about creating
something more from something
less'

(Smith & Thelen, 2003 p. 343)



Nýtt og nýtt lag
eftir áreyti/reynslu

Skill

- Skill refers to an action or a task that is carried out voluntarily – with a clear goal or intentions
- The term skill refers to the level of proficiency on a specific task or limited group of tasks (Fleishman, 1966, p. 148)
- Action capacities (Csikszentmihalyi, 2008)
- Quantitative changes – new skills
- Qualitative changes – being better at specific skill

Ability

- Ability refers to a more general trait of the individual which has been inferred from certain response consistencies (e.g. correlations) on certain kinds of tasks (Fleishman, 1966, p.147/148)
- Schmidt (1991) argue that abilities are underlying, **inherent**, relative stable properties, while skills are trainable
- One example – the visual system
- (Stein & Walsh, 1997) – developmental disorder



Frídrett - Aníta Hinriksdóttir
Gylfi Sígurdsson - fotball



Probabilistic Epigenesis

BIDIRECTIONAL INFLUENCES

ENVIRONMENT
(Physical, Social, Cultural)

BEHAVIOR

NEURAL ACTIVITY

GENETIC ACTIVITY

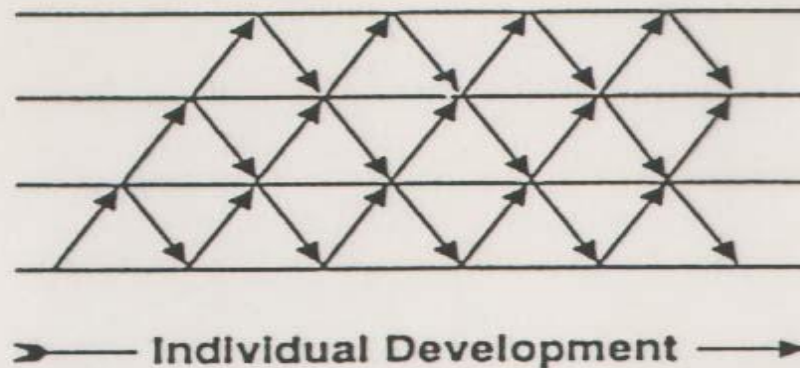


FIG. 8.5. A developmental-psychobiological systems framework. From *Individual Development and Evolution: The Genesis of Novel Behavior* by Gilbert Gottlieb. Copyright © 1991 by Oxford University Press, Inc. Reprinted by permission.

Maturation

Growth,

Experience

Learning

Þroski

Vökstur

Reynsla

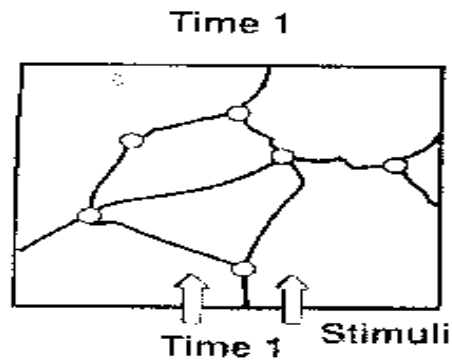
Nám



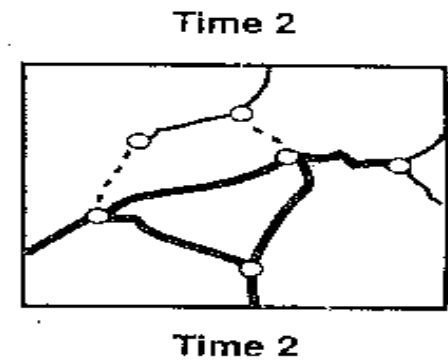
Edelman

Experiential Selection

(Yielding Secondary Repertoire)



Changes in Strength of
Population of Synapses





Edelmans theory

- Edelmanns theory on 'neural Darwinism' argues that the process of learning can be explained as a process of selection that takes place inside the neural system. The theory emphasizes how stimuli and practice increase **connections** within specific areas of the brain
- Practice of a task strengthens the **neural network** that are used for that particular task

Task specificity



Motor skill - balance

Table 6.2-1 Results from the experiment by Drowatzky and Zuccato (1967) showing the correlations among six different tests of static and dynamic balance.

Test	1 Stork Stand	2 Diver's Stand	3 Stick Stand	4 Sideward Stand	5 Bass Stand	6 Balance Stand
1	-	0.14	-0.12	0.26	0.26	0.03
2		-	-0.12	-0.03	-0.07	-0.14
3			-	-0.04	0.22	-0.19
4				-	0.31	0.19
5					-	0.18
6						-

From J. N. Drowatzky and F. C. Zuccato, "Interrelationships Between Selected Measures of Static and Dynamic Balance," in *Research Quarterly for Exercise and Sport*, 1967, Vol. 38, pp. 509-510. Copyright © 1967 American Alliance for Health, Physical Education, Recreation, and Dance. Reprinted by permission.



Motor skills

	PC	TB	BT	CBB	RBG	OB	JC	WHR
PC	1	,155	-,031	,032	,233*	,028	-,015	,014
TB		1	,203	,081	-,005	,362**	,348**	,057
BT			1	,243*	,109	,130	,071	,160
CBB				1	,155	,395**	,079	,401**
RBG					1	,045	-,136	,614**
OB						1	,270**	,177
JC							1	-,034
WHR								1

* Correlation is significant at the 0.05 level (2 tailed)

** Correlation is significant at the 0.01 level (2 tailed)

(Haga et al. 2008)

Technical skills in football

1 **Table 2:** Pearson product moment correlations between the 8 sub task of Test of
2 Technical Skills in football (N=23). The sub task are: Juggling (J); Heading (H); Passing
3 (P); Kick (K); Dribbling (D); Corner precision (CP); Shooting precision (SP); Wall-
4 volley (W).

	P	H	K	D	PC	PS	W
Juggling	-.01	-.14	-.20	-.14	.27	-.26	.51*
Passing (P)		.26	.41	-.40	.26	-.13	.25
Heading (H)			-.32*	-.28	.21	.17	.05
Kick (K)				-.07	-.27	.03	.19
Dribbling (D)					-.29	.01	.06
Corner precision (CP)						-.24	.16
Shooting precision (SP)							-.05
Wall-volley							

6

7

Learningprocess

Implications

Motivation

Generalisation



Automatisation



Acquiring and refining the skill



Understanding the skill

Repetition



Copying

Trying and practising

Generality and Specificity

Generality:

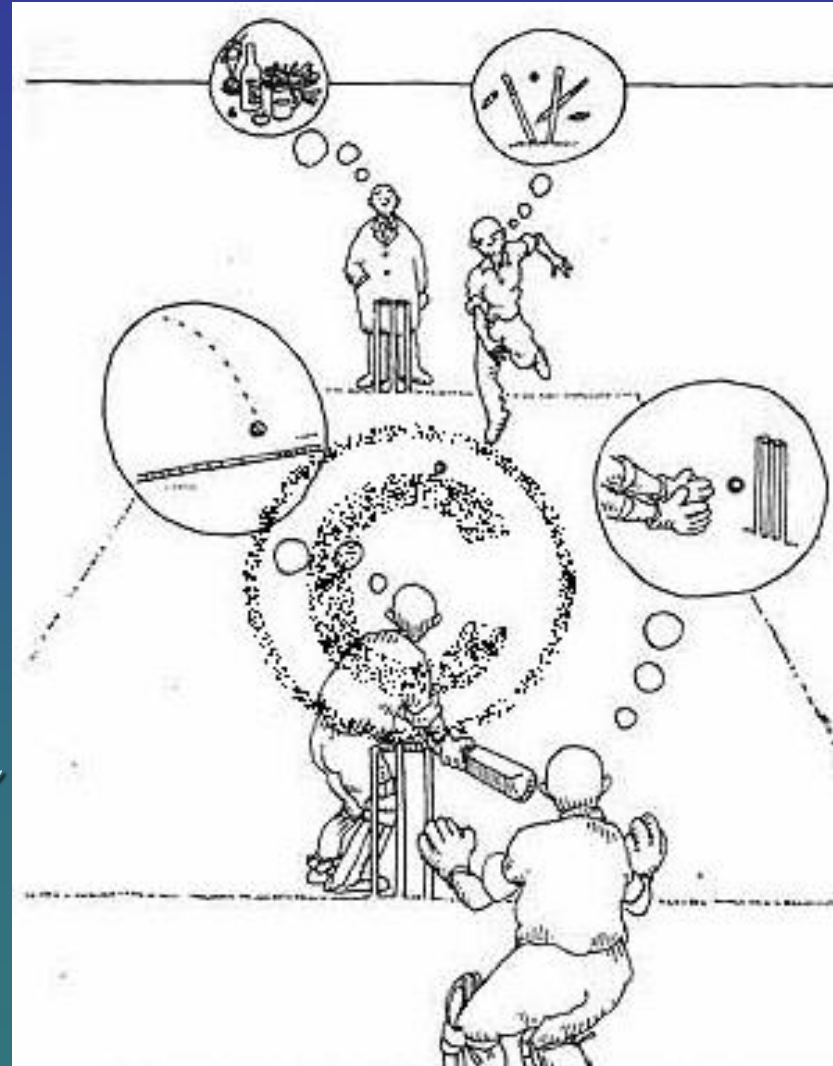
Concentration,
focus, interest

How do we create that?

Specificity:

You develop what you train

How do we learn/train in
the best way?



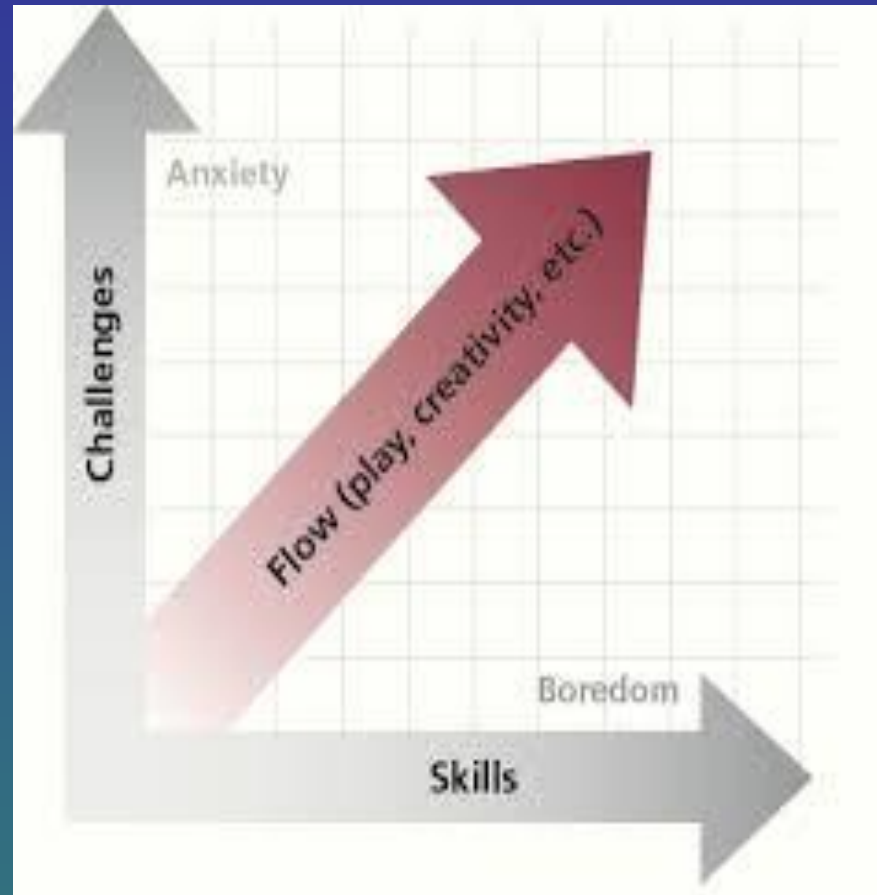
Learning principles

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



Learning principles

(2) The level of difficulty is set so that the child can manage the task, and the difficulty of the task is gradually increased as a result of the child's success



(Csikszentmihalyi, 2008)

Learning principles

- (3) Frequent positive feedback is given



Learning principles

- (4) Selfmonitoring of daily achievements is encouraged in the child



Kulturelle påvirkninger



- (1) Lov å være god
- (2) Lov å ha ambisjoner. Lov å vinne kamper/konkurranser. Ikke kun være med



BIDIRECTIONAL INFLUENCES

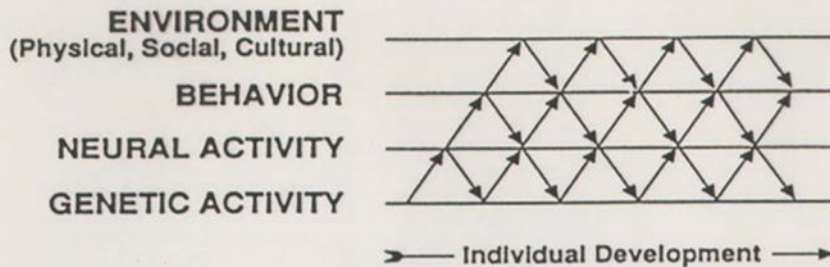


FIG. 8.5. A developmental-psychobiological systems framework. From *Individual Development and Evolution: The Genesis of Novel Behavior* by Gilbert Gottlieb. Copyright © 1991 by Oxford University Press, Inc. Reprinted by permission.

Kulturelle påvirkninger

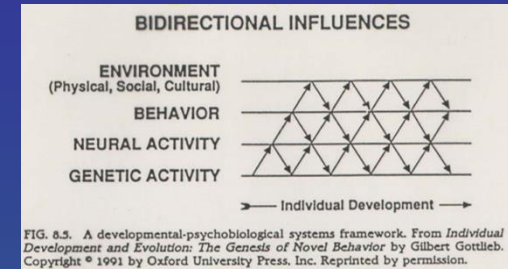
- (3) Tøff kultur - robust



Kulturelle påvirkninger



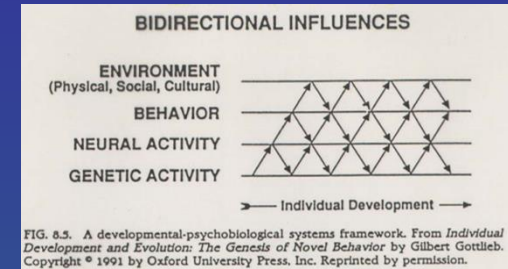
- (4) Gode forhold – anlegg
- Der barna og ungdommen bor



Kulturelle påvirkninger



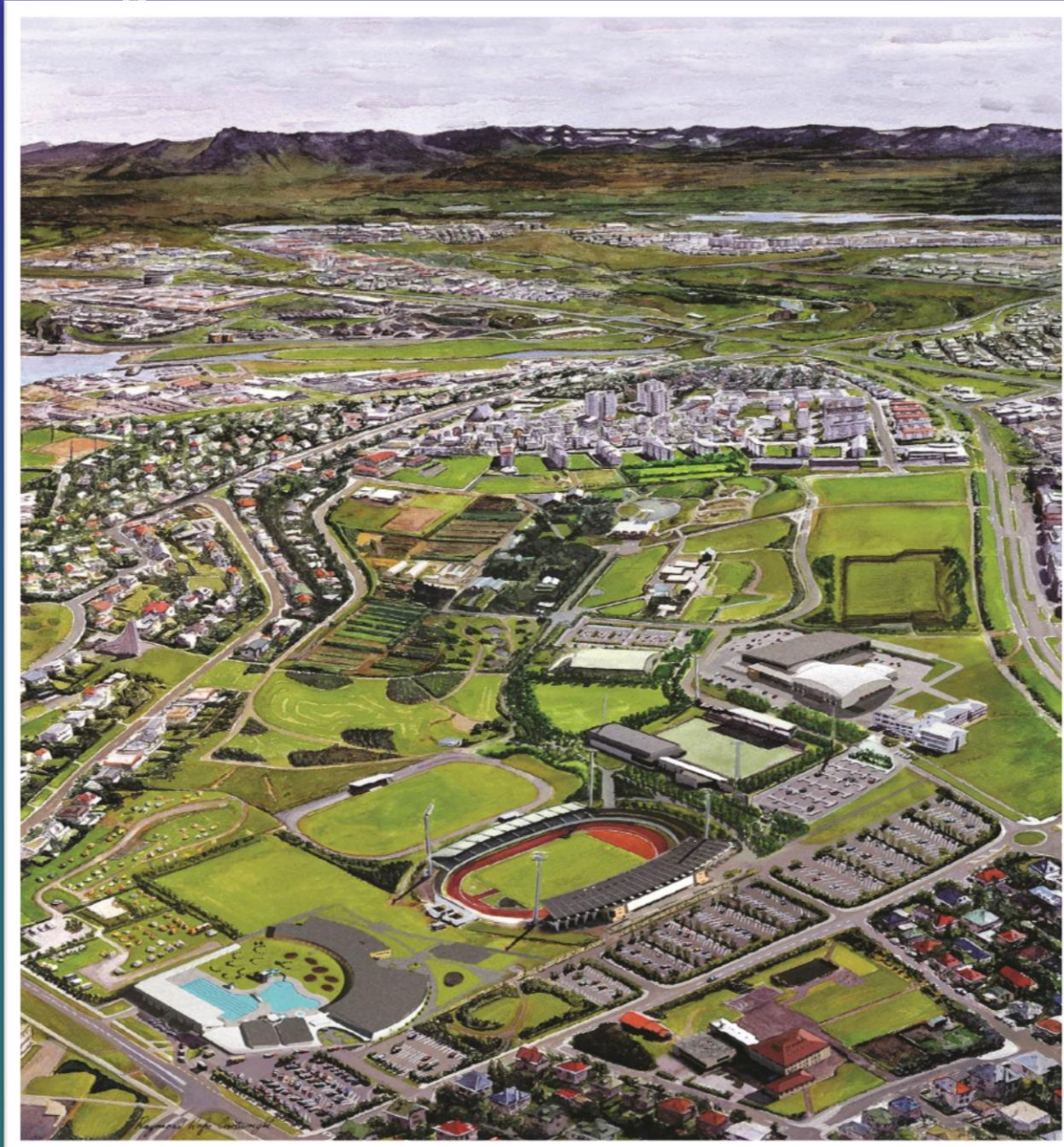
- (5) Kommune – skole – idrett



Kulturelle påvirkninger



Reykjavík - Laugardalur



Høyt nivå på trenere



- Faglærere i idrett (bsc) – arbeider både i grunnskolen og videregående skole
- Trenerkompetanse i tillegg innen den idretten de trener
- Høy kompetanse
- Konkurrans mellom klubbene
- Trenere får bra betalt
- Samhold mellom trenere



Trenere håndball



Youth coaches 2014-2015

Education level in each age group



Team	Name	Education	Name	Education
U19	Brynjar Björn Gunnarsson Björn Másson Kristján Másson	UEFA – A UEFA – B UEFA - B	Hilmar Sigurjónsson	UEFA - B
U16	Þórhallur Siggeirsson Sigurður Heiðar Höskuldsson Heiðar Atli Emilsson	UEFA – A / MSc SS UEFA – B -	Garðar Gunnar Ásgeirsson Hilmar Sigurjónsson	UEFA – A UEFA – B
U14	Sigurður Heiðar Höskuldsson Þórður G. Pétursson Guðjón Þór Ólafsson Pablo Puyned	UEFA – B / BSc SS UEFA – B / BSc SS UEFA – B National Caps	Helena Ólafsdóttir Aníta Lía Anna Björk Kristjánsdóttir	UEFA – A / BSc SS - National Caps
U12	Unnar Jóhannsson Þórður G. Pétursson Veigar Páll Gunnarsson	UEFA – B UEFA – B / BSc SS National Caps	Helena Ólafsdóttir Adda Baldursdóttir	UEFA – A National caps
U10	Halldór Ragnar Emilsson Ottó Valur Leifsson	UEFA – B studying SS	Hilmar Sigurjónsson Anna María	UEFA – B National caps
U8	Unnar Jóhannsson Davíð Sævarsson	UEFA – B Studying SS	Þórarinn Einar Engilbertsson	UEFA – A
U6	Þórarinn Einar Engilbertsson	UEFA – A	Þórarinn Einar Engilbertsson	UEFA – A

SS = sport science

Høyt nivå på trenere

- Svømming (10-14 år) - Gudmundur Hardarson (landslagstrener Island)
- Friidrett (10-18 år) - Gudmundur Thorarínsson (landslagstrener Island)
- Handball (14-18 år)
- - Thorbjörn Jensson (landslagstrener Island)
- - Boris Abseckív (landslagstrener CSSR)



Mye trening



- Fotball Stjarnan FK, Gardabær:
- 5-7 år 2 treninger 1 uke
- 8-10 år 2-3 treninger 1 uke
- 11-12 år 3-4 treninger 1 uke
- 13-15 år 4-5 treninger 1 uken
- 16-19 år: 5-6



Learningprocess



(Henderson & Sugden, 1992; Hago et al. 2006)

Runar Pall Sigmundsson, hovedtrener Stjarnan FK

Mye trening

- Fotball Stjarnan FK, Gardabær:



Mye trening



- Fotball:
- Fleste av Islands landslags spillere som vant Holland dro unge til profflivet



Mye trening

- Aron Einar Gunnarsson (1989): 17 år
- - Thor Akureyrri (2005-2006)
- - AZ (2006-2008)
- - Coventry City (2008-2011)
- - Cardiff City (2011-)
- - 2005: Iceland U17 - 7 games
- - 2006-2008: Iceland U19 - 16 games
- 2007-2011: Iceland U21 - 11 games
- 2008- : Iceland - 53 games



Mye trening

- Gylfi Sigurdsson (1989): 16 år
- - FH -2002
- - Breidablik (2003-2005)
- - Reading (2005-2008)
- - 1899 Hoffenheim (2010-2012)
- - Tottenham Hotspur (2012-2014)
- - Swansea City (2014-)
- 2005: Iceland U17 - 3 games
- 2006-2007: Iceland U19 - 15 games
- 2007-2011: Iceland U21 - 14 games
- 2010- : Iceland - 31 games



Mye trening



- Håndball:
- 5-7 år 2 trenínger 1 uke
- 8-10 år 2-3 trenínger 1 uke
- 11-12 år 3 trenínger 1 uke
- 13-15 år 4 trenínger 1 uken
- 16-19 år: 5 trenínger 1 uken

- Trenerlønn: 50-90.000 ISK 1 måneden
- Treníngsavgífter, støtte fra firmaer, støtte fra kommunene

Mye trening

- Aron Palmarsson (1990): 19 år
- - FH -1998-2009. 15 år gammel spilte sin første kamp i eliteserien
- - THW Kiel (2009-2015)
- - MKB Veszprem (2015-)
- 2008- : Iceland - 92 games (343 goals)



Mye trening

- Svømming: 2 uker så mange økter som du er gammel dvs:
- 6 år - 3 ganger i uken
- 14 år gammel - 7 treninger i uken (1 morgen trening)
- 4-7 år 45 min økter
- 7-10 år 60 min økter
- 11-12 år 90 min økter
- 13- år 120 min økter

Mye trening

- Svømming: Jon Margeír (født 1992)
íslandsk handikappsvømmer- para OL gull i
London 2012 - 200 m frí
- Har trent de siste 7 år med ofötludum:
- Gjennomsnitt:
 - 12 timer i vann - 6x2 i vann
 - 2 timer styrke
 - 3 timer motor control
- Tøffe uker:
 - 18 timer i vann - 9 x 2 timer
 - 85-90% oppmøte



Mye trening

- Turn:
- De som satser.
- 8 år: 5 x 3 timer treninger 1 uke
- 9-12 år: 6 x 3-4 timer =
- 20-24 timer 1 uken
- De som ikke satser:
- 12 år: 3 x 2 timer



Gardabær 12.274
innbyggere 700 in Turn



Mye trening

- Friidrett: IR
- 17 - : 1-7 ganger i uken
- 15-17 år: 1-6 ganger i uken
- 13-14 år: 1-4 ganger i uken
- 11-13 år: 1-3 ganger i uken
- 9-11 år: 1-2 treninger i uken
- 8 år og yngre: 1-2 treninger i uken



Mye trening

- Jon Pall Sigmarsson (1960-1993)
- Skuli Oskarsson (75 kg) EM 1978

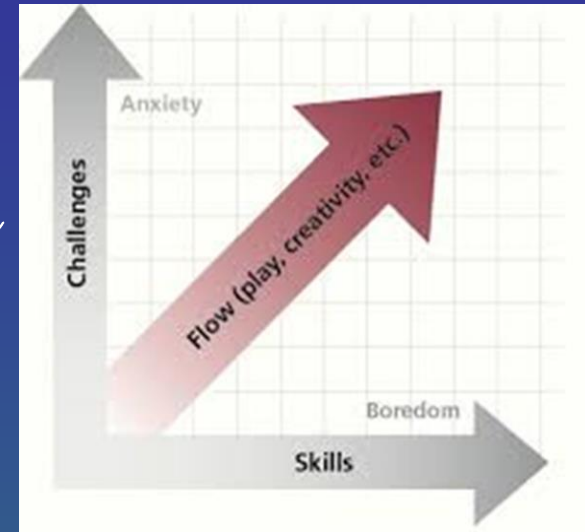


- Katrín Tanja Davíðsdóttir, verdens mester i Crossfit 2015
- - Turn i 10 år

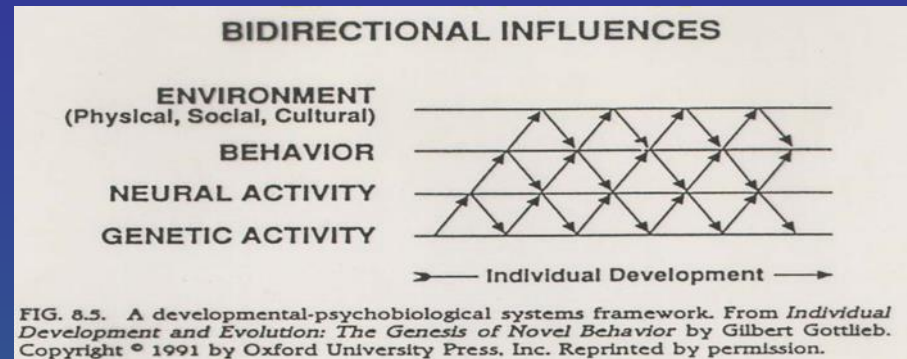


utfordringer i forhold til ferdigheter

- På Island er det vanlig å dele inn i lag etter ferdighetsnivå
- Fotball A, B, C, D
- Men det som er viktig er at alle de barna som er med i fotball i feks. Stjarnan G-10 får samme treningsopplegget. Det er kun i kamper som man deler inn
- Stor vekt på treningene, ha gode økter (=gode trenere), skape gleden ved å være med på trening

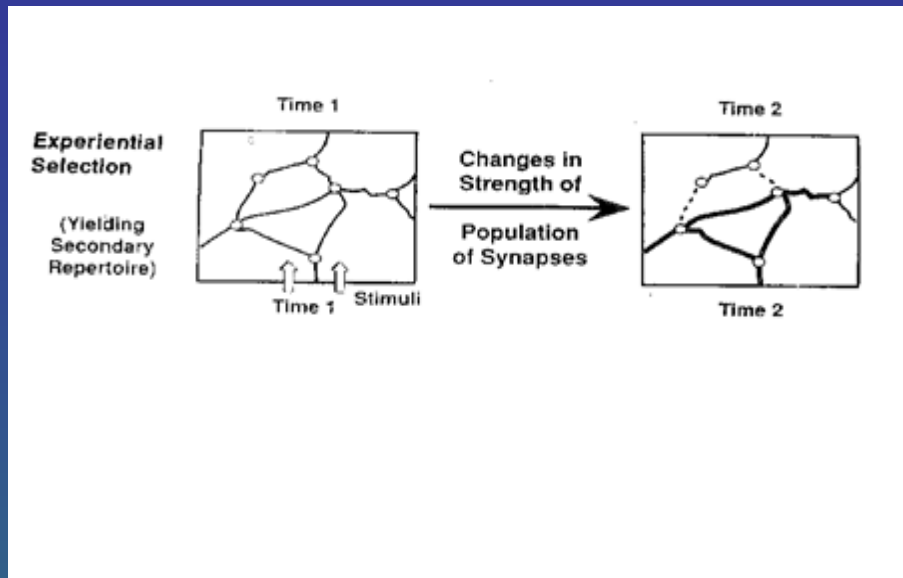


Konklusjon



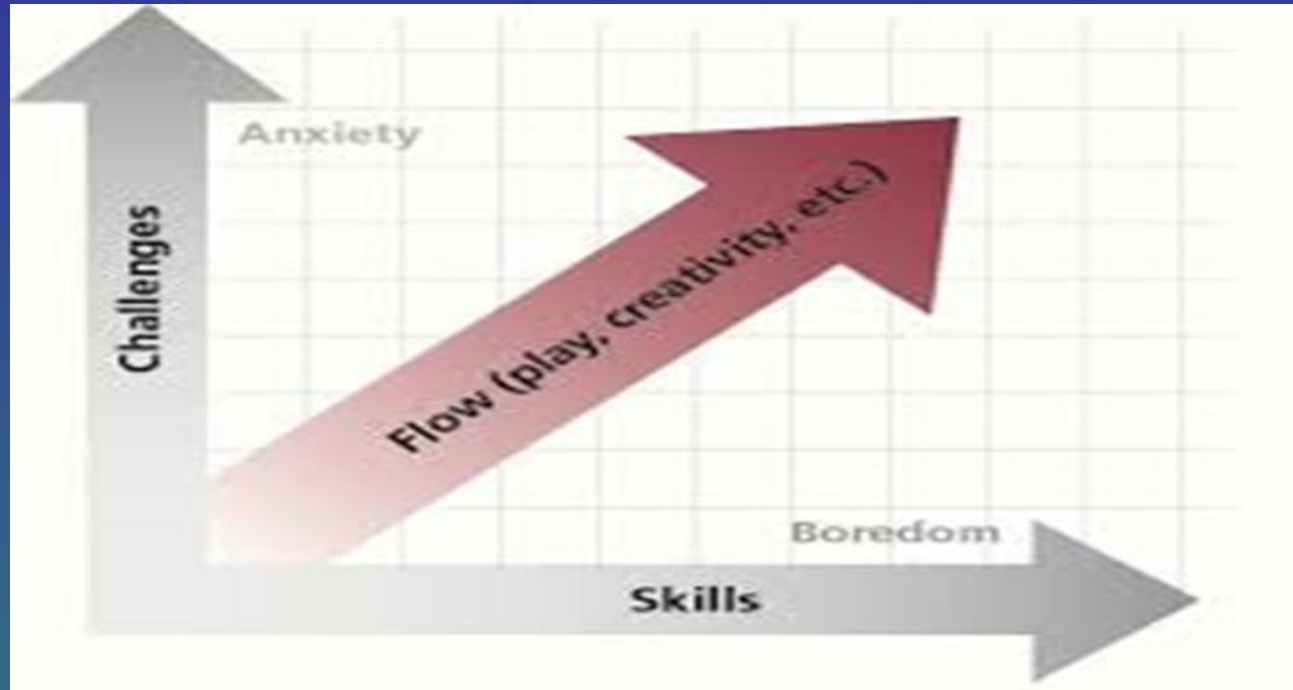
- Kulturelle påvirkninger
 - Lov å være god
 - Lov å ha ambisjoner
 - Tøffere kultur – mer robust
- Gode forhold – anlegg – der barna bor – kommune-skole- idrett

Konklusjon



- Høyt nivå på trenere
- – godt opplegg
- – god oppfølging
- Mye trening – variert trening

Konklusjon



- utfordringer i forhold til ferdigheter