embodied learning

transformative learning

creative learning

experiential learning

deep learning

expansive learning

incidental learning

intentional learning

Theories of Learning

lifelong learning

Oppiminen ja Ohjaus KTKP010

Lecture 1

Josephine Moate

Intuitive & expert learning

social & situated learning

emancipative learning

biographical learning

vicarious learning

Kasvatustieteen opiskelua ilmiölähtöisesti

Kasvatuksen ja oppimisen ilmiöitä -> Kasvatustieteen opinnoissa opiskeltavat ja tutkittavat ilmiöt

- Oppiminen ja ohjaus
- Vuorovaikutus ja yhteistyö
- Kasvatus, yhteiskunta ja muutos
- Tieteellinen ajattelu ja tieto
- Osaaminen ja asiantuntijuus

Kasvatustieteen osa-alueita, esim.

- Kasvatuspsykologia
- Kasvatussosiologia
- Kasvatuksen historia
- Kasvatusfilosofia
- Didaktiikka (opetusoppi)

Eri kasvatustieteitä, esim.

- Varhaiskasvatustiede
- Aikuiskasvatus
- Erityispedagogiikka

Situating this lecture

Kasvatustieteen opiskelua ilmiölähtöisesti

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- Tieteellinen ajattelu ja tieto
- Osaaminen ja asiantuntijuus

Kasvatustieteen osa-alueita, esim.

- Kasvatuspsykologia - how individuals take shape
- Kasvatussosiologia - how individuals & schools are part of society
- Kasvatuksen historia - how practices take shape over time
- Kasvatusfilosofia - how educators think about what they do
- Didaktiikka (opetusoppi) - particular practices for the purposes of teaching

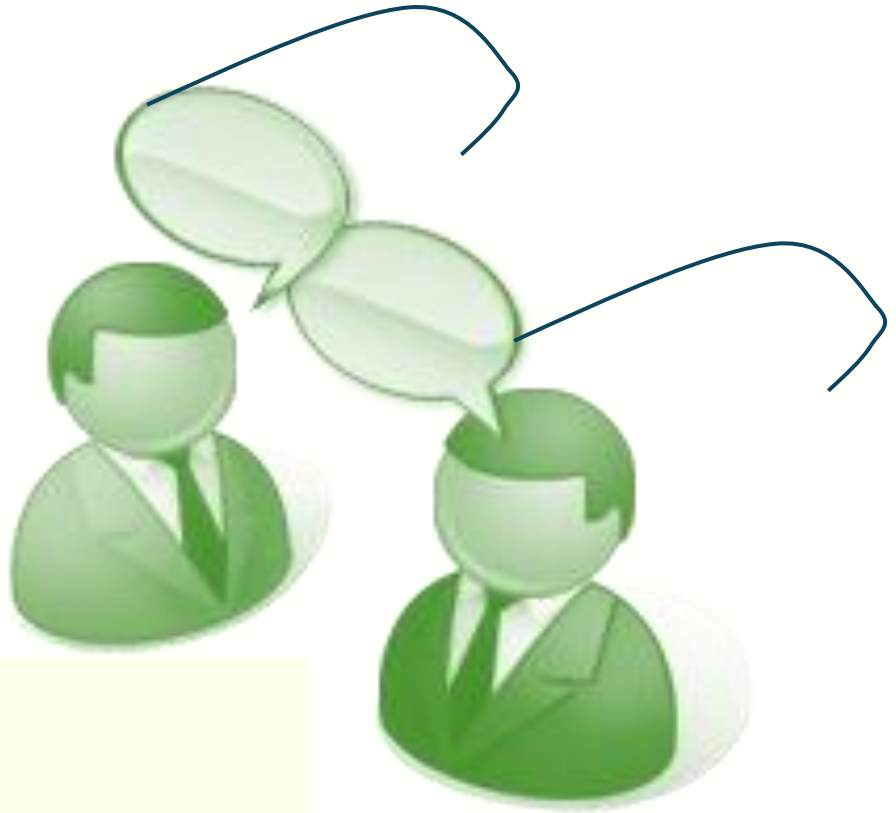
Eri kasvatustieteitä, esim.

- Varhaiskasvatustiede
- Aikuiskasvatus
- Erityispedagogiikka

Question: What is theory?

ancient Greek *θεωρία* action of viewing, contemplation, sight, spectacle (OED, 2026)

A shared way of talking about,
A shared way of viewing



Theories of Learning

teoria (Filosofia)

1. oppirakennelma
2. yleinen havaintoja ja tosiasioita selittävä käsitejärjestelmä
3. saavutettujen tietojen jäsentelyn, hallinnan ja tiivistämisen järjestelmä, joka edeltää tutkimusta

TIETEEN TERMIPANKKI
VETENSKAPSTERMBANKEN I FINLAND
THE HELSINKI TERM BANK FOR THE ARTS AND SCIENCES

Aims:

- To gain an overview of different theories of learning
  - What is involved in a theory of learning
  - Different foci and interests
  - Implications for educators
- To start making connections between theoretical perspectives and learning (the theory-practice dialogue)
- To recognise the value and limits of theory
- To develop your language (English, Finnish) to be able to think about learning from different perspectives

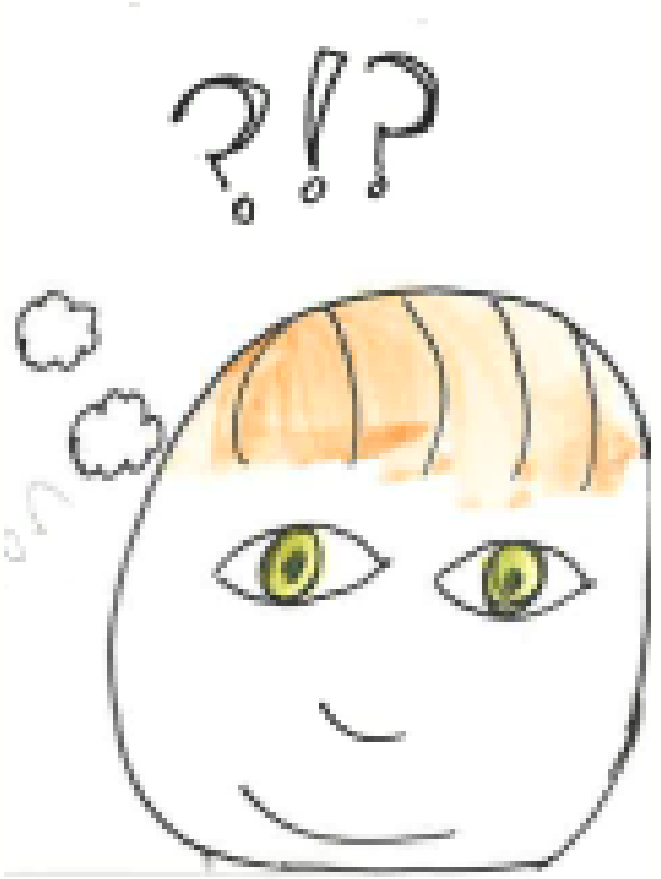
I. PSYCHOLOGY AND THE TEACHING ART

The American educational organization,—What teachers may expect from psychology,—Teaching methods must agree with psychology, but cannot be immediately deduced therefrom,—The science of teaching and the science of war,—The educational uses of psychology defined,—The teacher's duty toward child-study.

William James, 1899

Pohdintaa yksin/pienryhmissä (2 mins)

- Mitä oppiminen mielestäsi on? Miten määrittelisit oppimisen?
- Why is learning important for you as a student? As an educator?
- Is learning always good?



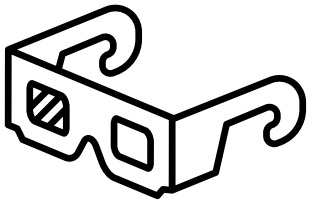
What is learning?

- What is learning? Is learning to ride a bike the same as learning to play the piano or to read? What about learning to swim?
- A change in behaviour? A change in understanding? A goal-directed process? Only visible afterwards? Always good?
- Can learning ever be passive – something that ’happens’ to a learner? Does learning always involve action on the part of the learner?
- An important, often forgotten, question – what do we learn for? **What is the purpose of learning?**

Biesta, 2022; Bruner, 2004











Good to know:

Learning theory is a broad topic with blurred outlines and many approaches that overlap in different areas and different ways. (Illeris, 2018, p.96)

Some theories complement each other, some contradict each other. Sometimes one theory is the basis for another theory. Sometimes one theory is very popular, until it is replaced by another perspective.

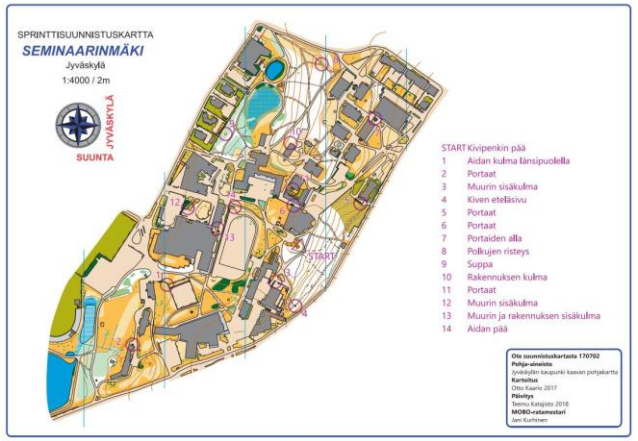
The theory that is used influences how we see / view learning, how we understand what learning is and what educators do to promote learning.

Different theories are like different maps

A map for being taken from A to B



A map for running around seminaari mäki



A map for choosing how to get from A to B



A map for locating Finland



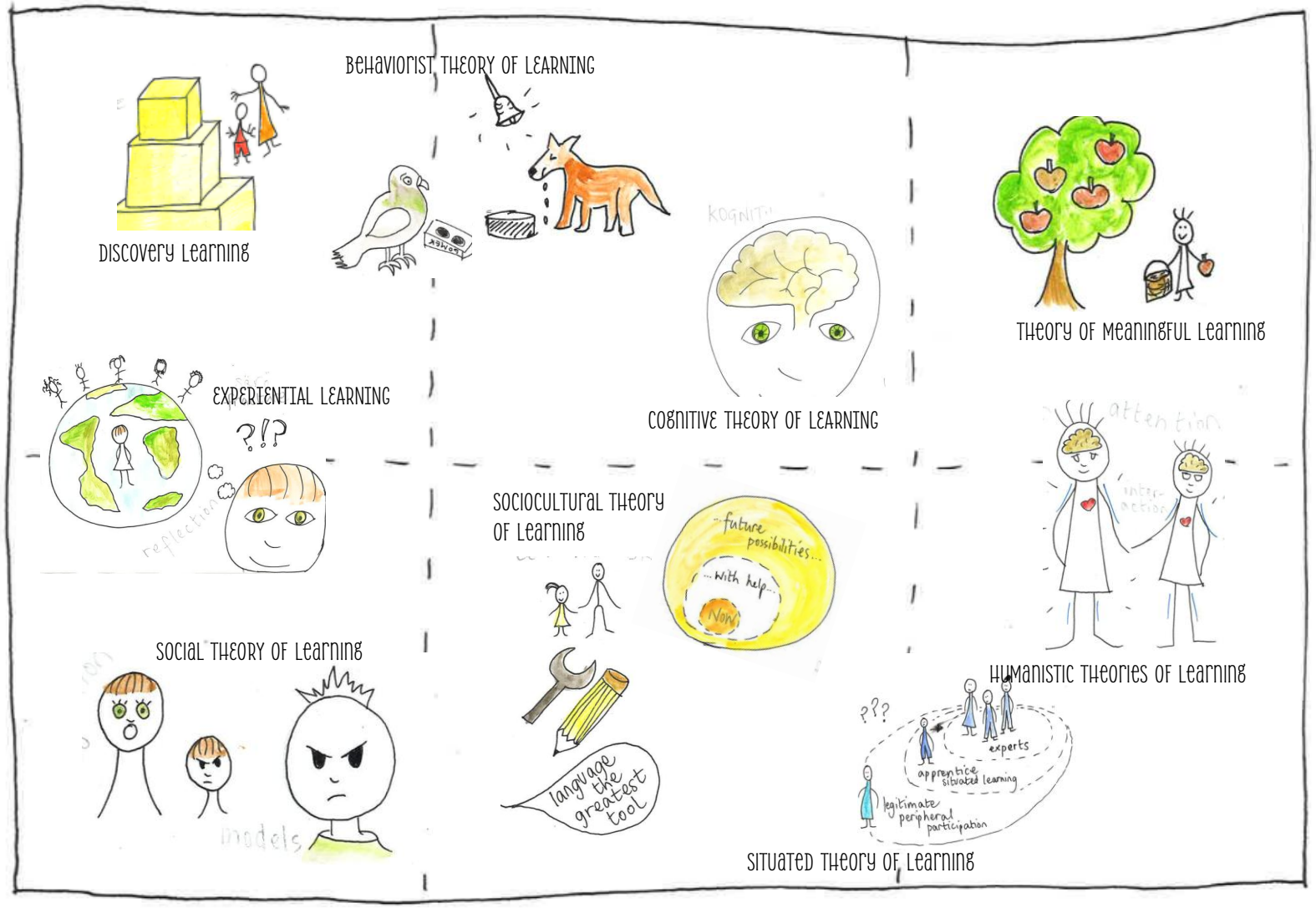
Huom!
No map gives the full picture. **All theories change & develop over time.**

This lecture will provide the basic Features of the different theories. Your readings and discussions during and after this course will to add this basis.

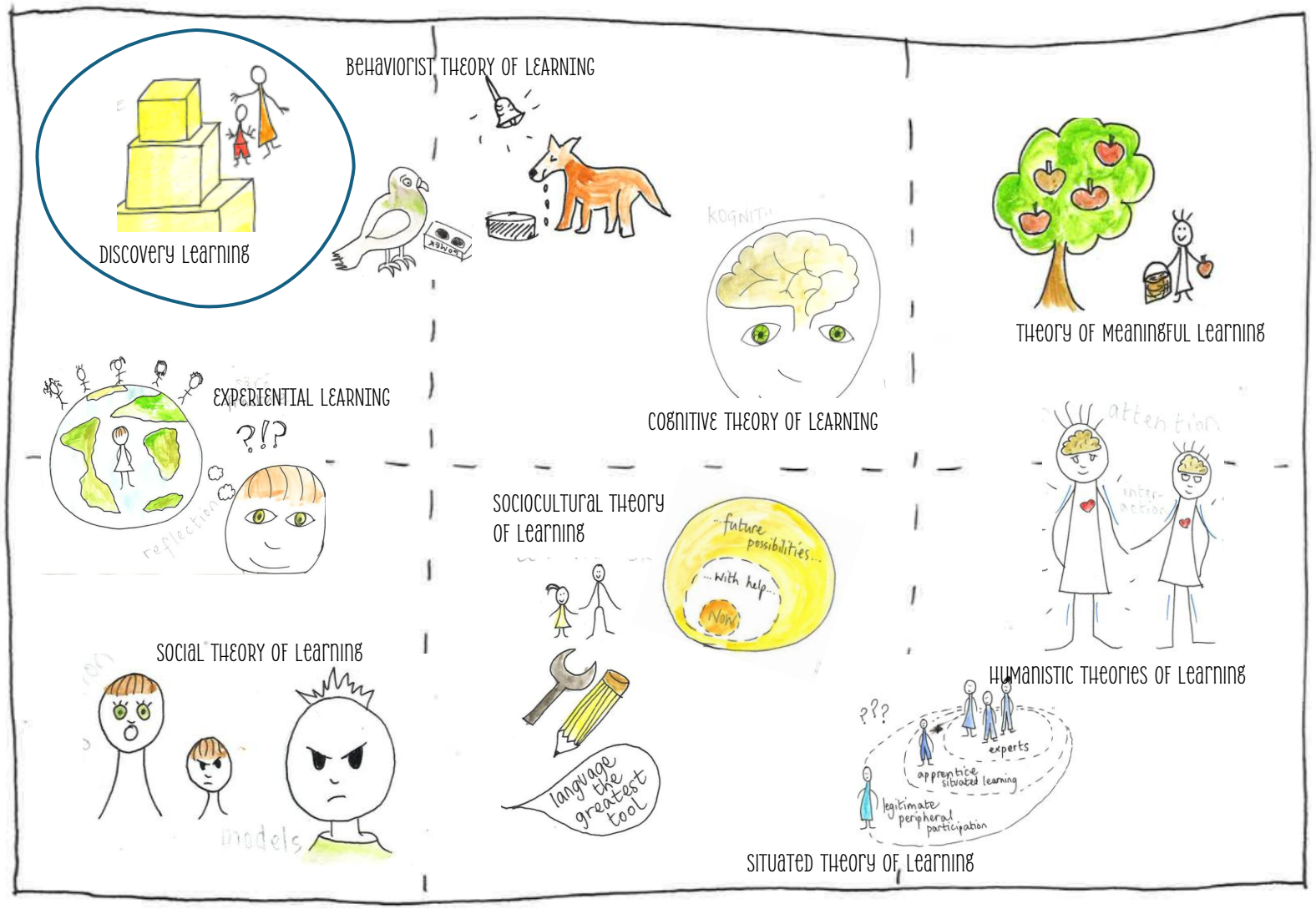


’You are here’

This lecture – an initial map of learning theories



Where to begin?



How might these different theories 'see' learning? How might they begin to define or explain learning? First thoughts ☺

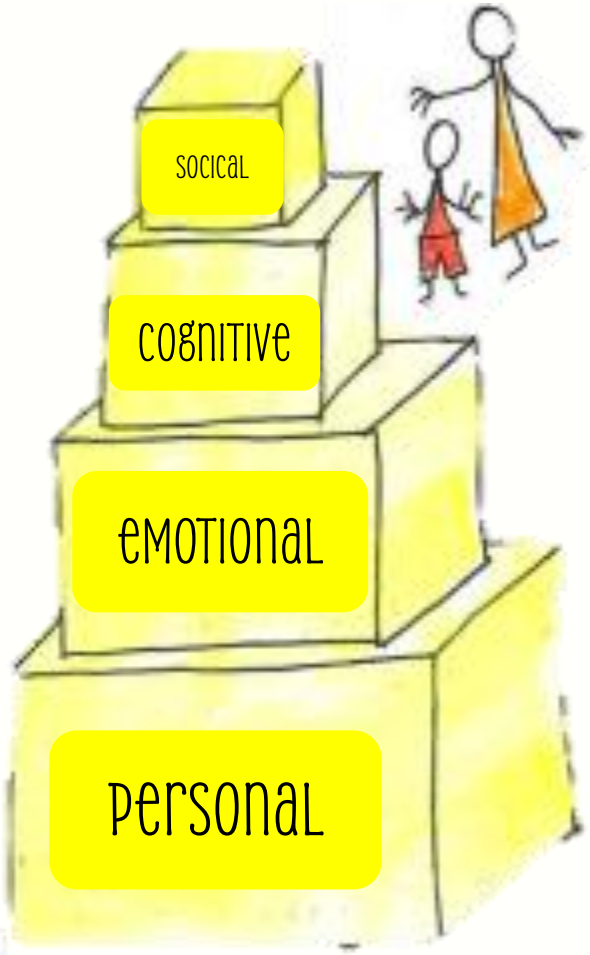
Discovery learning

Maria Montessori (1870-1952)



https://en.wikipedia.org/wiki/Maria_Montessori

Teacher a **guide** and **facilitator**



Careful observation and action with children highlighted:
Importance of **discovering for oneself**, **hands-on**
Importance of **independence, choosing** what to focus on – although required to get materials & tidy up afterwards
Concentration and **interest** to learn **innate** quality
Authentic and **carefully prepared** environment – materials, furniture

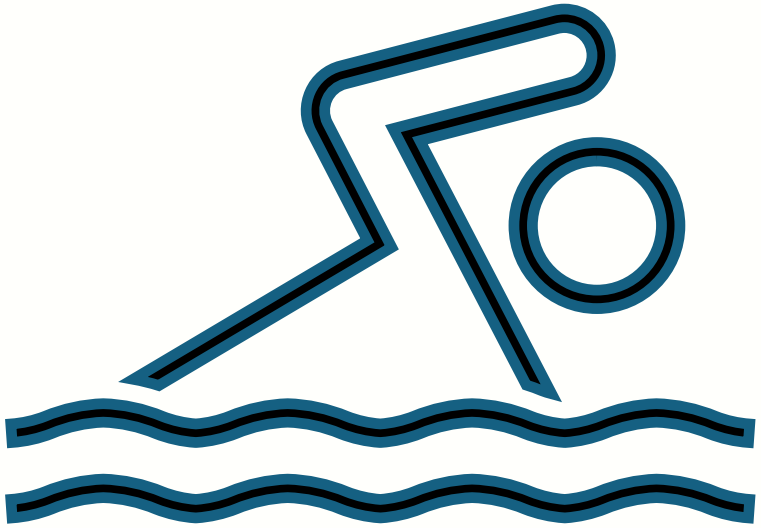
4 planes of development:

1. Normalisation (0-6)
2. Intellectual independence & herd (6-12)
3. Initial construction of adult self (12-18)
4. Adult independence (18-24)



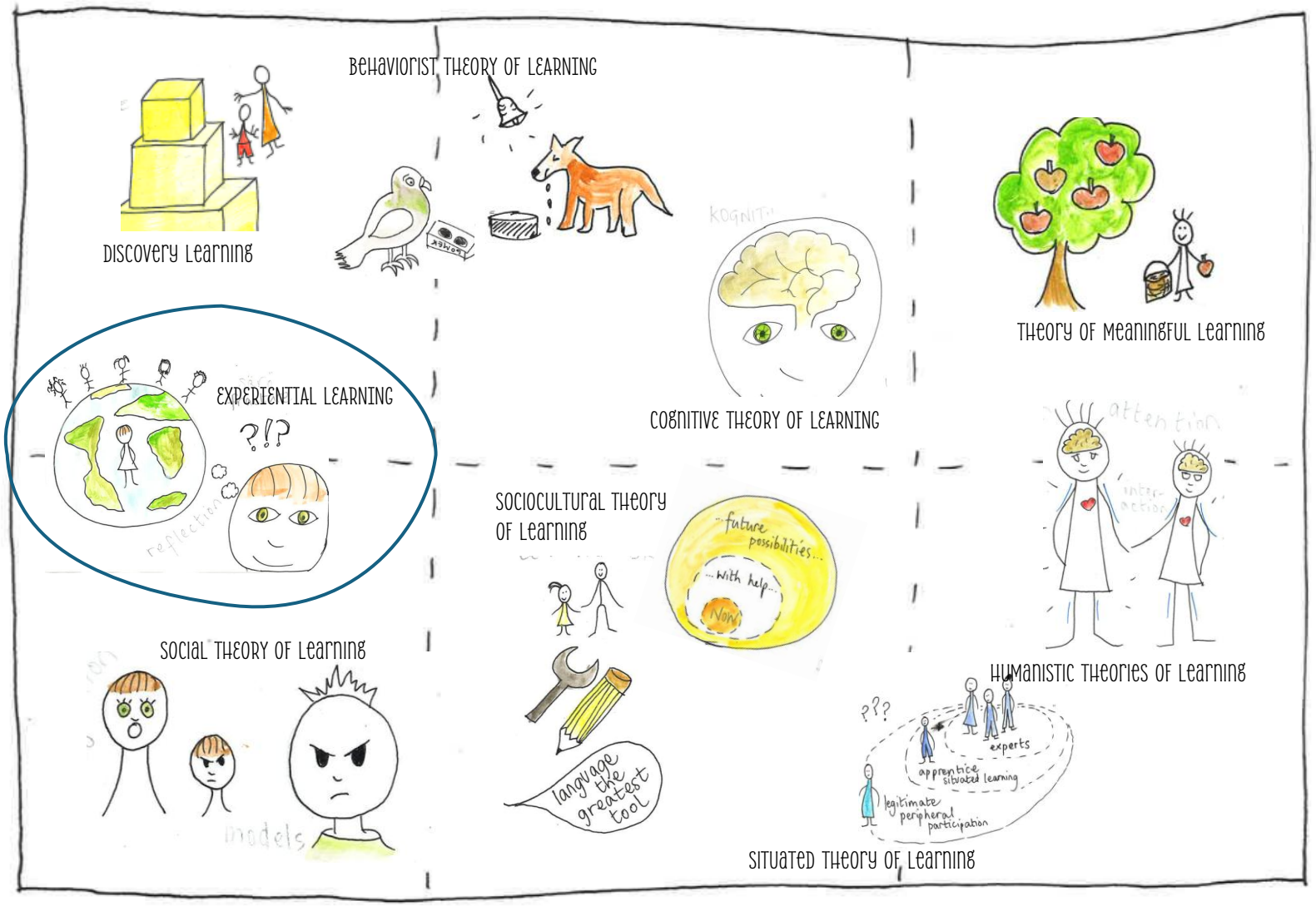
https://estaticos.elmundo.es/albumes/2012/07/25/diseno_infantil/1343240389_extras_albumes_0_1024.jpg

Montessori swimming lessons



- fostering natural curiosity
- eliminating fear
- at the child’s pace
- specially designed pools

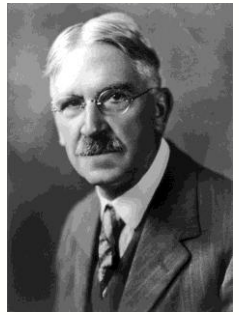
Where next?



See what connections you can make between different theories – and see what tensions, even contradictions, you can find!

Experiential learning, Kokemuksellinen oppiminen

John Dewey, 1859-1952



https://en.wikipedia.org/wiki/John_Dewey



School is important as no young person alone could discover all knowledge that has come before

Education is not only for gaining **knowledge**, but to foster **democratic participation** – how to live in the world with other people

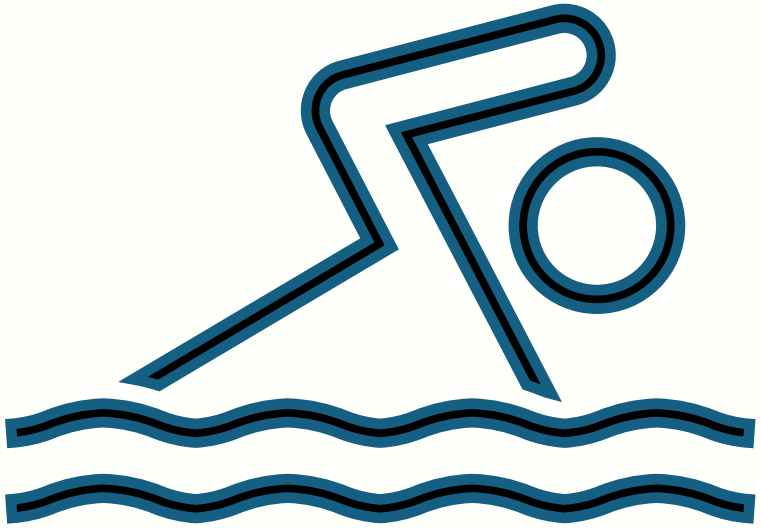
Through experience an individual knows what is, what is (not) possible, and has more **resources** for individual & shared life.

Through experience an individual is always connected to the environment and mutual change is happening.

Thinking is as natural as breathing, **but we don't always think well** – with careful **reflection** we can recognise & re-form our habits

Teachers have something to bring to students, and students are active participants in their own (and other's) education

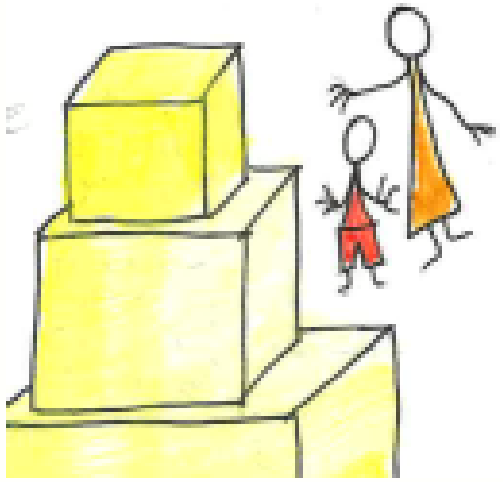
Experiential swimming lessons



- swimming in a pool different than swimming in open water (ocean, sea) or wild swimming (river) – changing conditions affect experience, technique
- reflecting on technique and value of swimming

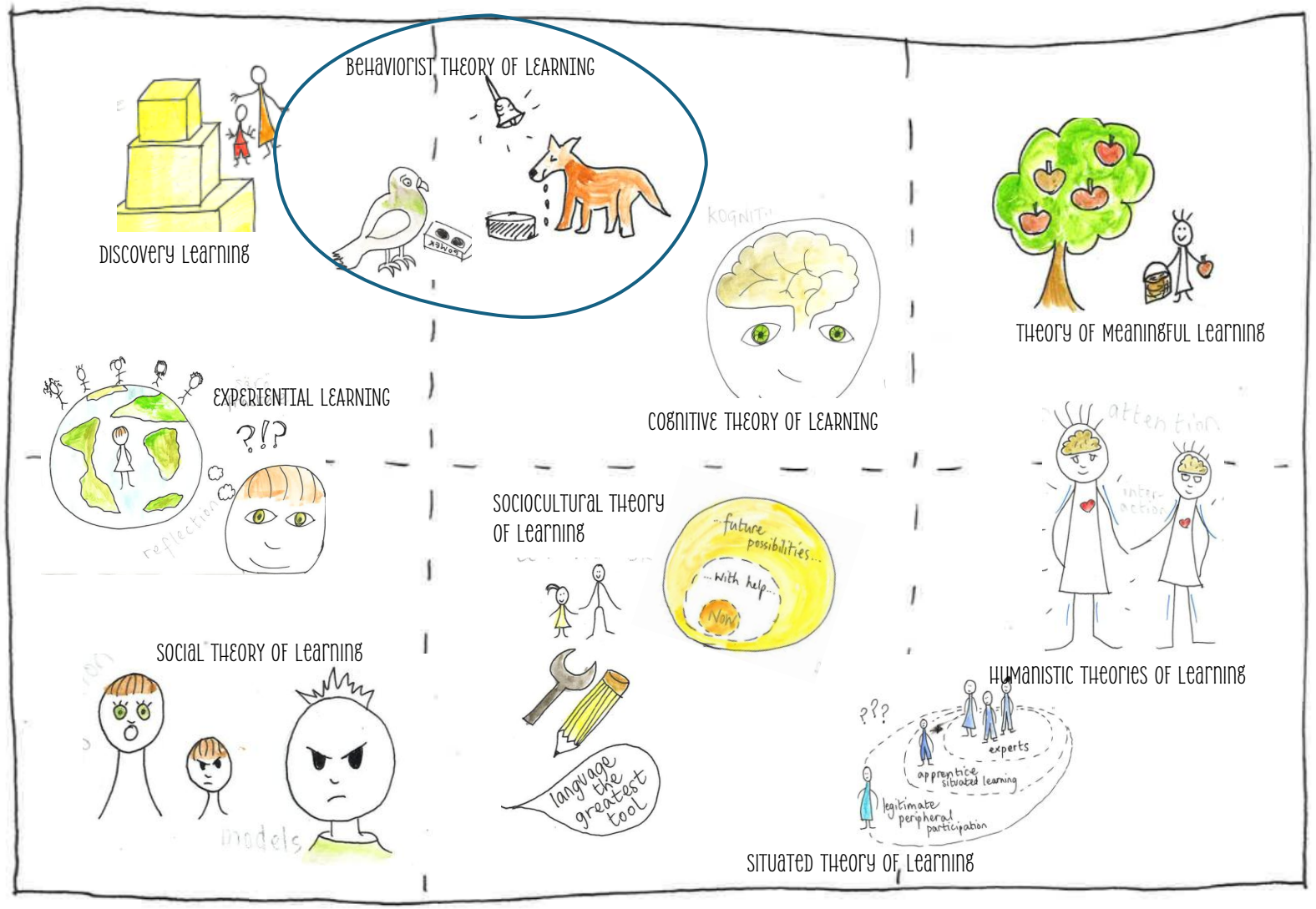
What do you think?

- Consider these two first theories – that are associated with different kinds of practices – what is the role of the learner in these theories?





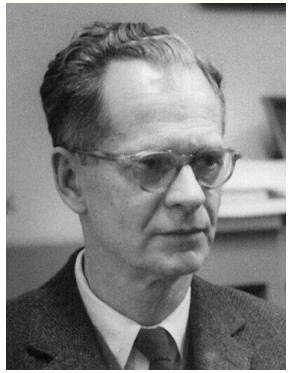
Time for a different view!



In what ways is learning different in this theory?

Behaviorist learning
Behavioristinen (käytös)

B.F.Skinner (1904-1990)



https://en.wikipedia.org/wiki/B._F._Skinner



Classical conditioning – **klassinen ehdollistuminen**



Operant conditioning – **välineellinen ehdollistuminen**

- Skinner focused on **behaviour shaping** through (positive) reinforcement
- Focus on development – what is possible at a particular stage, always changing
- Environment – multiple stimuli in the present, **possible to control** (n.b. outside and inside stimuli)
- **Conditioning – ehdollistuminen** - changing the environment to foster and regulate desired development
- Reinforcement – **vahvike**
- Stimulus-response: **Ärsyke** ja **reaktio**
- Habit: **tapa** – automatic responses

Careful control of the environment can provide structure and reassurance for someone living with internal chaos or struggling with difficulties.

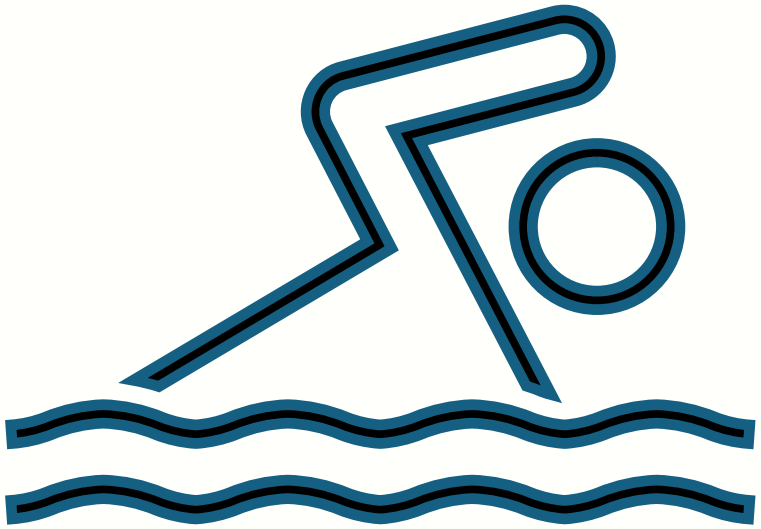
In this theory, what the learner thinks is given little attention

When Skinner visited his daughter's 4th grade math class:

- *It was Father's Day at Shady Hill, … I sat in … Debbie's fourth-grade arithmetic class. The students were at their desks solving a problem written on the blackboard. The teacher walked up and down the aisles, looking at their work, pointing to a mistake here and there.*
- *A few students soon finished and were impatiently idle. Others, with growing frustration, strained. Eventually the papers were collected to be taken home, graded, and returned the next day.*
- *I suddenly realized that something had to be done. Possibly through no fault of her own, the teacher was violating two fundamental principles: the students were not being told at once whether their work was right or wrong (a corrected paper seen twenty-four hours later could not act as a reinforcer) and they were all moving at the same pace regardless of preparation or ability. (p. 64)*

Skinner, B. F. (1983b). *A matter of consequences*. New York: Knopf.

Behaviorist swimming lessons



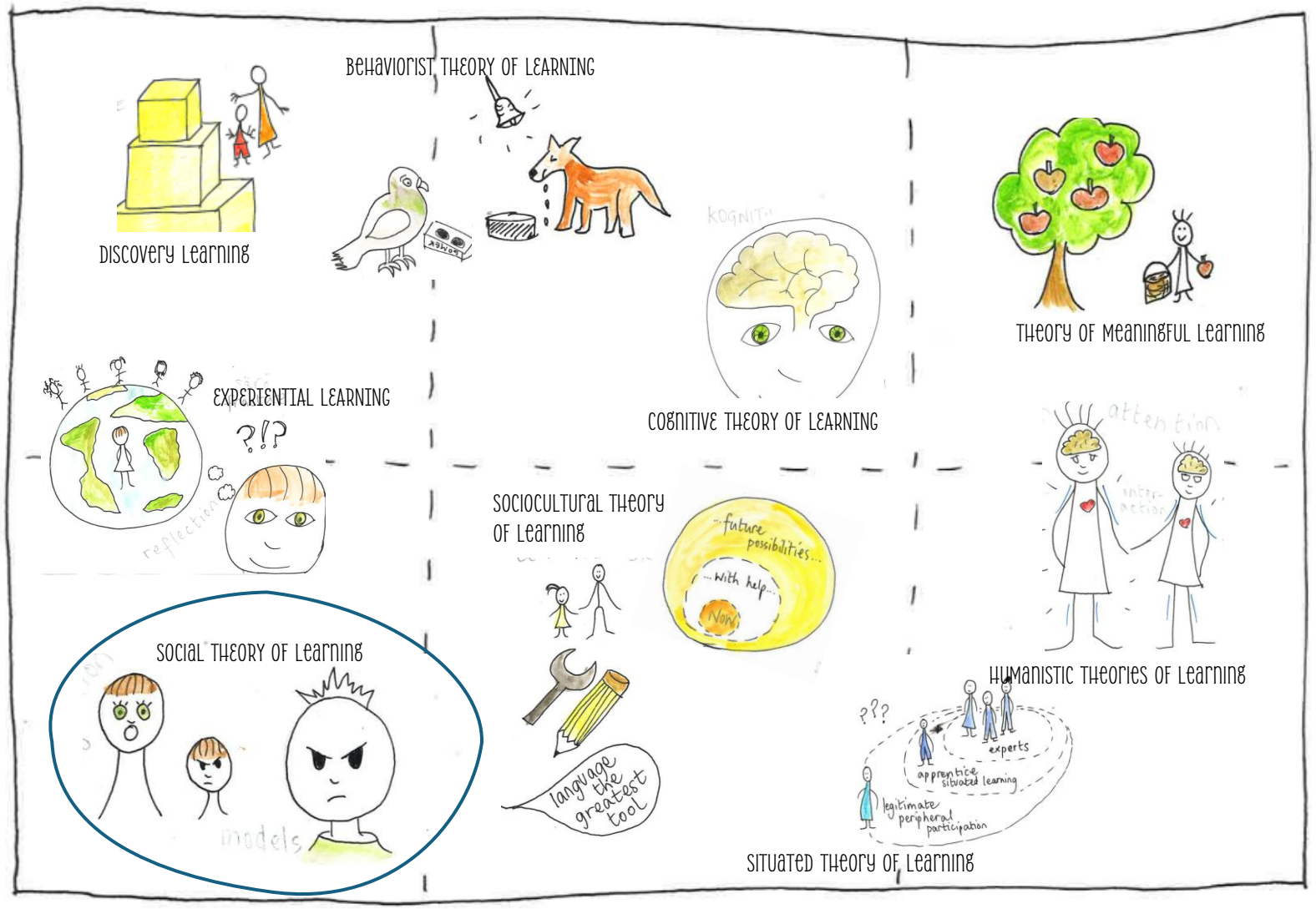
- motor control & habit formation
- skill development – repetition, drill
- focus on mechanics of swimming
- perhaps special tank for developing technique

Dewey’s critical response

- The ’stimulus-response’ formula of behaviorism for Dewey was too reductive, too simplistic. Dewey (1930) pointed out that any stimulus could only be considered a stimulus if there was a response and it was the response that determined what kind of stimulus was present.
- What is absent from behaviorism is the active nature of the learner – the willingness to learn (or not) and the significance of the wider environment

Dewey, J. (1930). Conduct and experience.

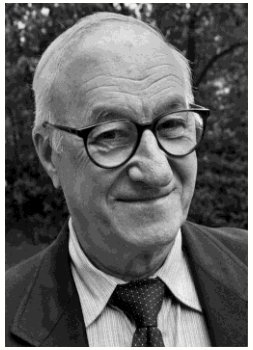
Time for a different view!



How does this theory view the relationship between children & adults?

Social learning theory
Sosiaallisen oppimisen teoria

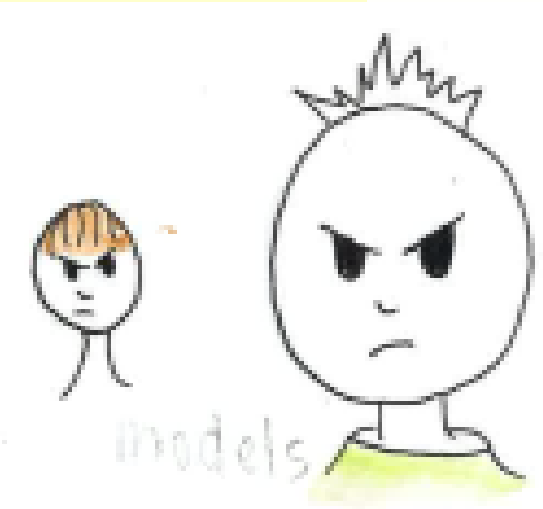
Albert Bandura (1925-2021)



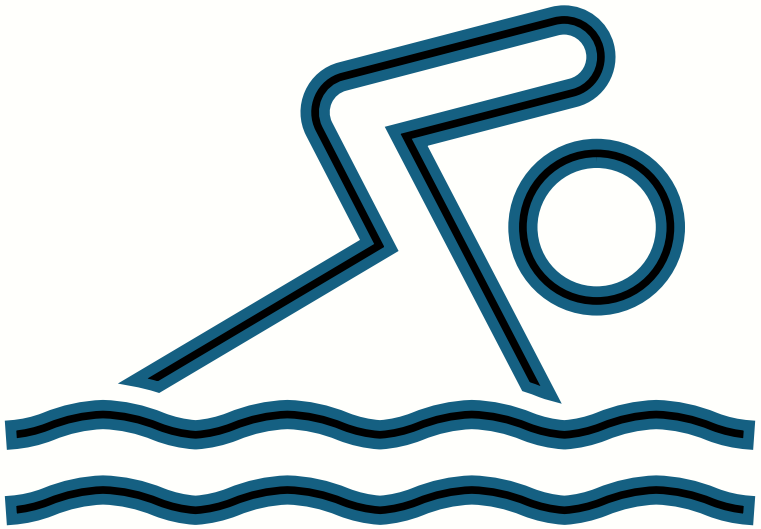
https://en.wikipedia.org/wiki/Albert_Bandura



- Children learn from what they see, adults are models
- Stimuli – need to be contextually appropriate (situated)
- Response – needs to be reinforced
- Cognitive functions – individuals observe and interpret the world around them – **havainto, tulkaus**
- Agency (toimijuus) – self-regulation,
  self-efficacy, goal-oriented, motivated

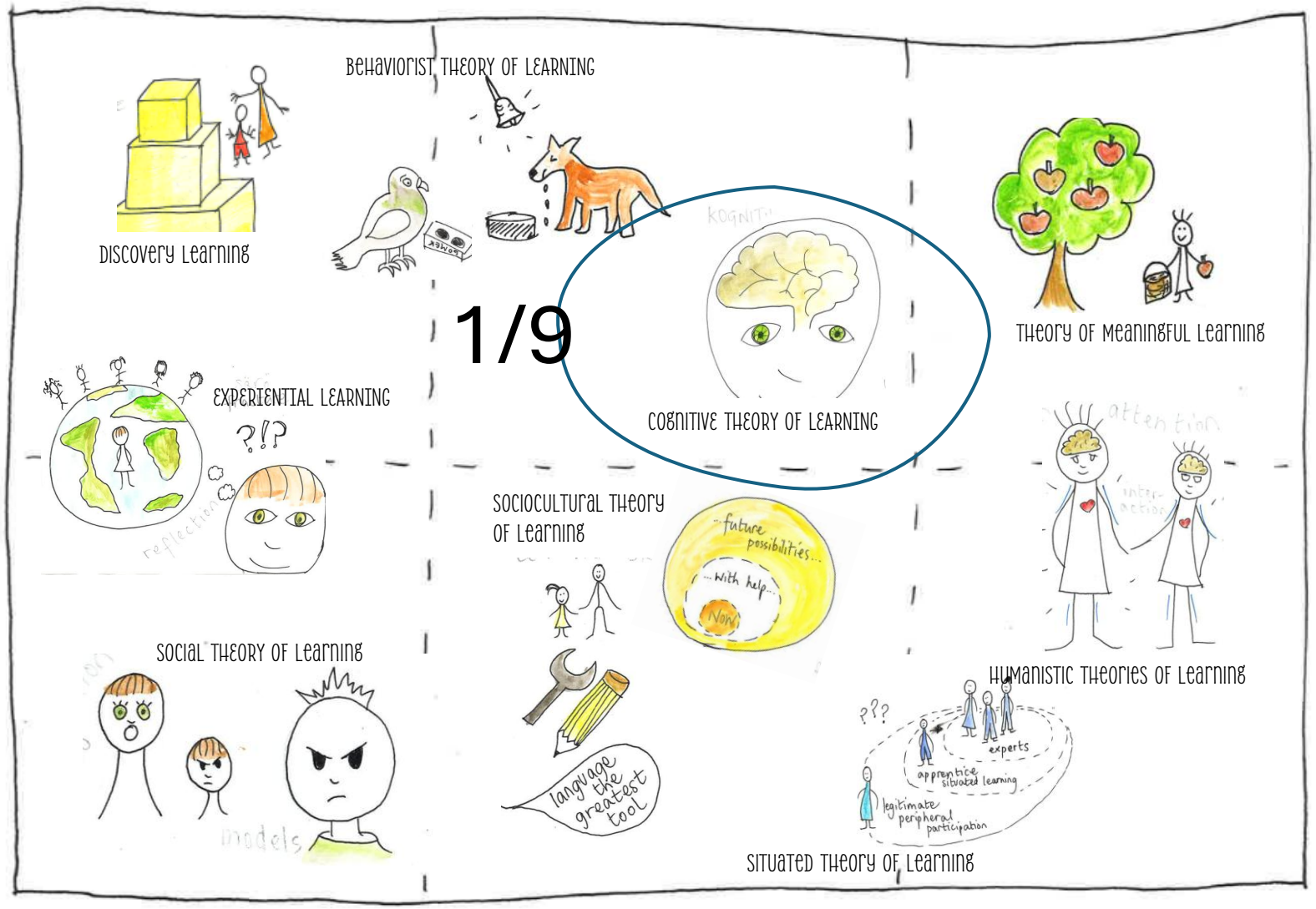


From behavorist to social learning



- observing others helps with self-development
- competence increases motivation
- goals give direction

Another view!



Where is the attention now?

5/9

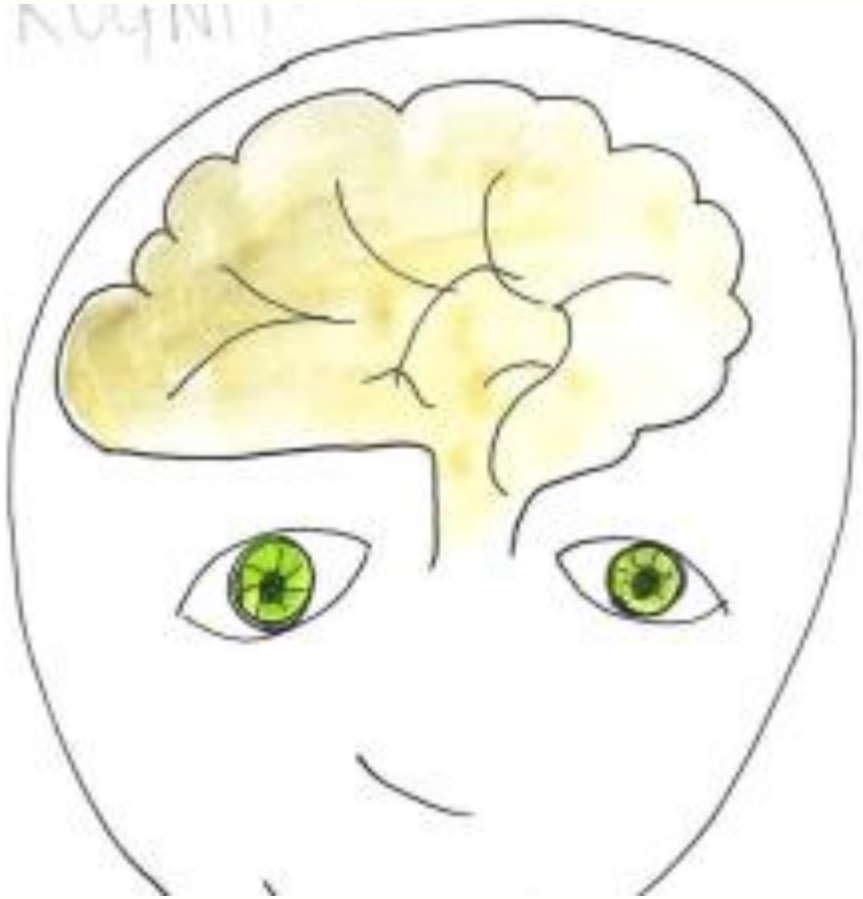
Cognitive learning
Kognitiivinen oppimiskäsitys

Piaget (1886-1980)

Bloom (1913-1999)



https://en.wikipedia.org/wiki/Jean_Piaget



- Whereas behaviorism focused on behavior, interest in intelligence focused attention on the inside
- Piaget was initially involved in IQ tests, but became interested in how the **quality** of children's intelligence was different from the **quality of adult intelligence**
- Piaget considered cognitive development to be dependent on biological maturation

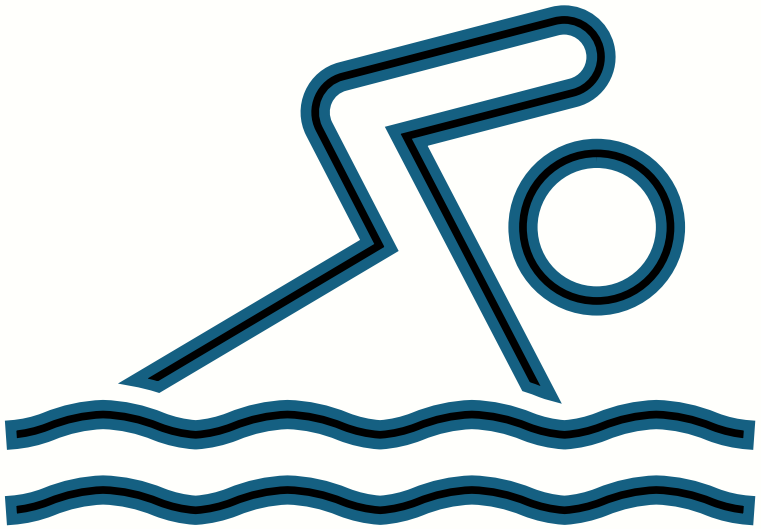
Stages of cognitive development



- Key terms include:
  - ’readiness’
  - schemas: skeema mielen sisäinen malli todellisuudesta
  - assimilation – **sulautuminen**
  - accommodation – making room - **mukautuminen**
  - tension nurtures intelligence, peer relationships help but adults - *Every time we teach a child something, we keep him from inventing it for himself’ (Piaget, 1972: 27)*.

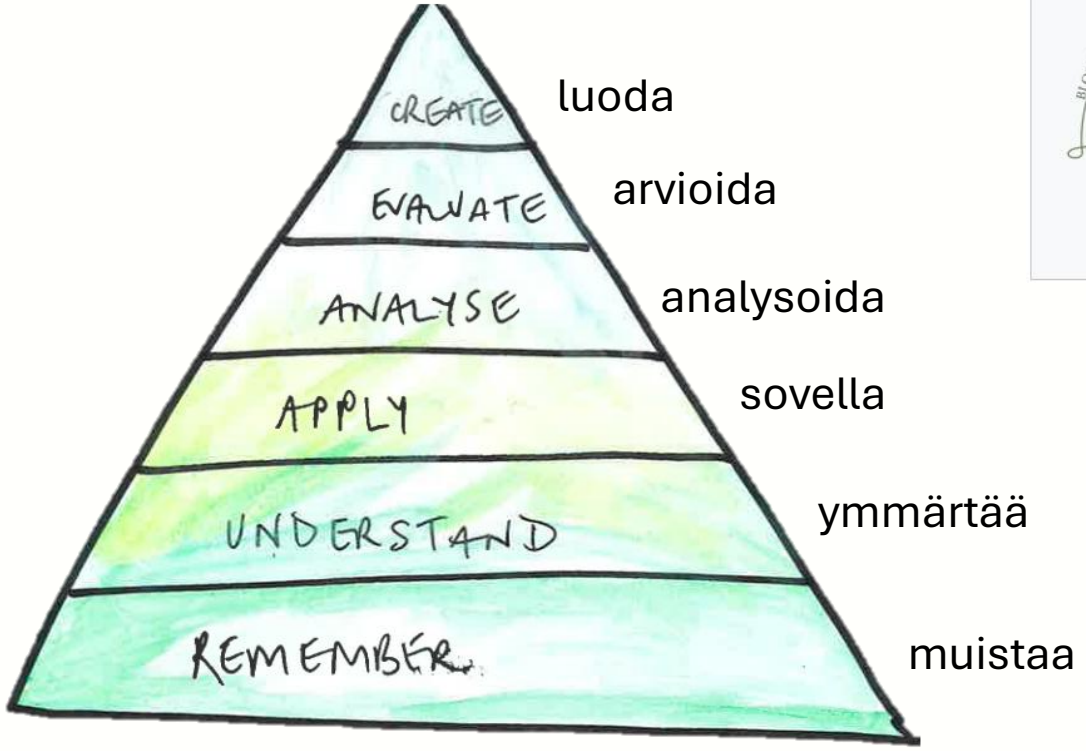
Piaget, J. (1972). Some aspects of operations. In M. W. Peris (Ed.), *Play and development* (pp. 15–27). New York: Norton.

Constructivist swimming from a Piagetian perspective



- child-centred, playful opportunity
- suitable for age and aligned with biological maturation
- swimming could be the extension of something already known (paddling pool → shallow pool →swimming pool)
- or as a new environment (land → water)

Bloom’s taxonomy – HOTS & LOTS



luoda

arvioida

analysoida

sovella

ymmärtää

muistaa

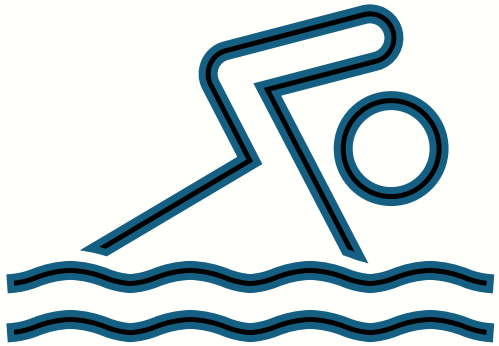






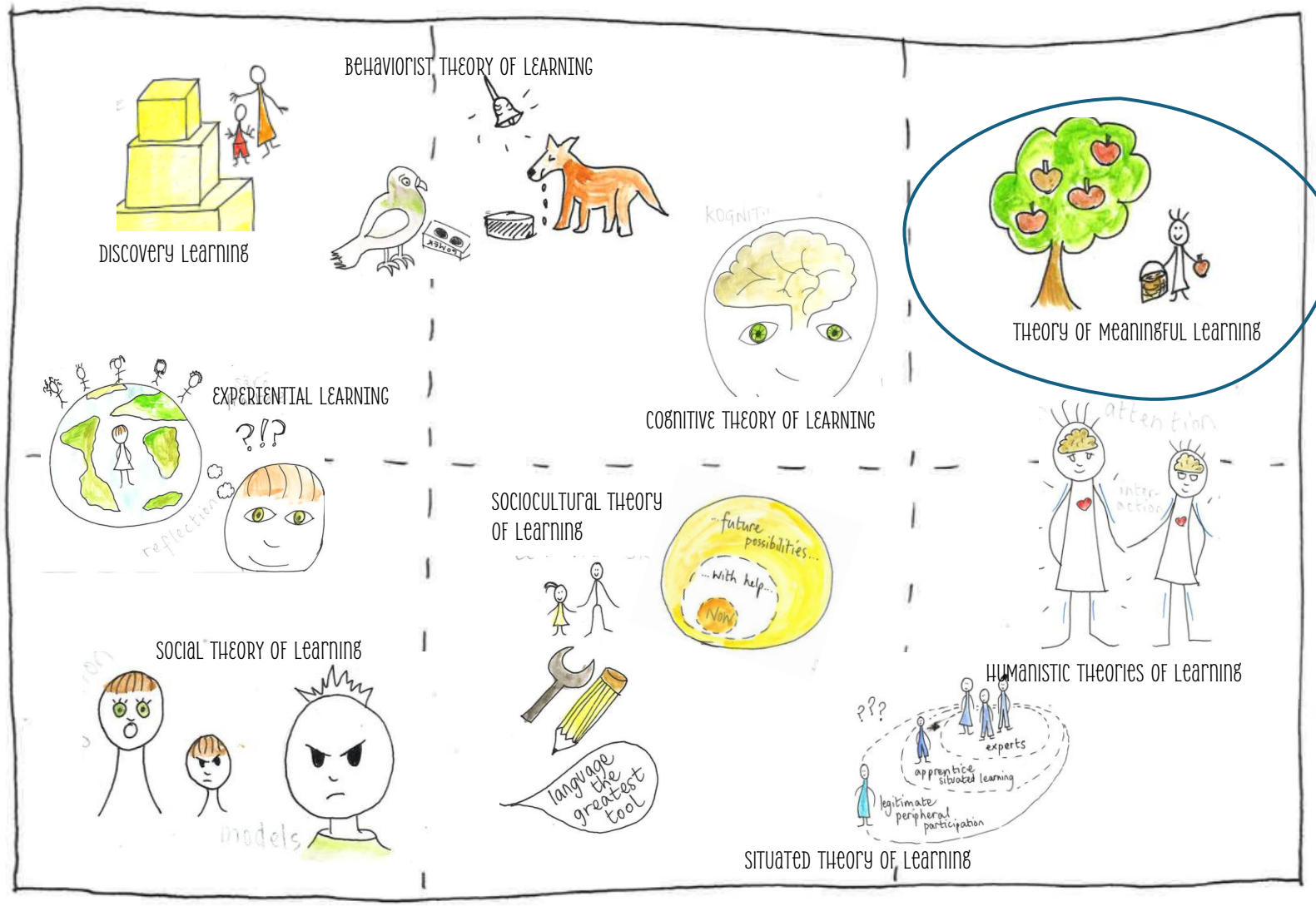


https://en.wikipedia.org/wiki/Bloom%27s_taxonomy



Bloom’s original version (1956)
revised by Krathwohl and Anderson (2001)

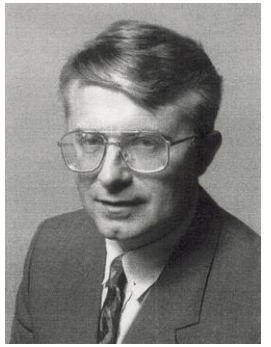
Another view!



Where is the attention now?

Meaningful learning
Merkityksellinen oppiminen

D. Ausubel, 1918-2008

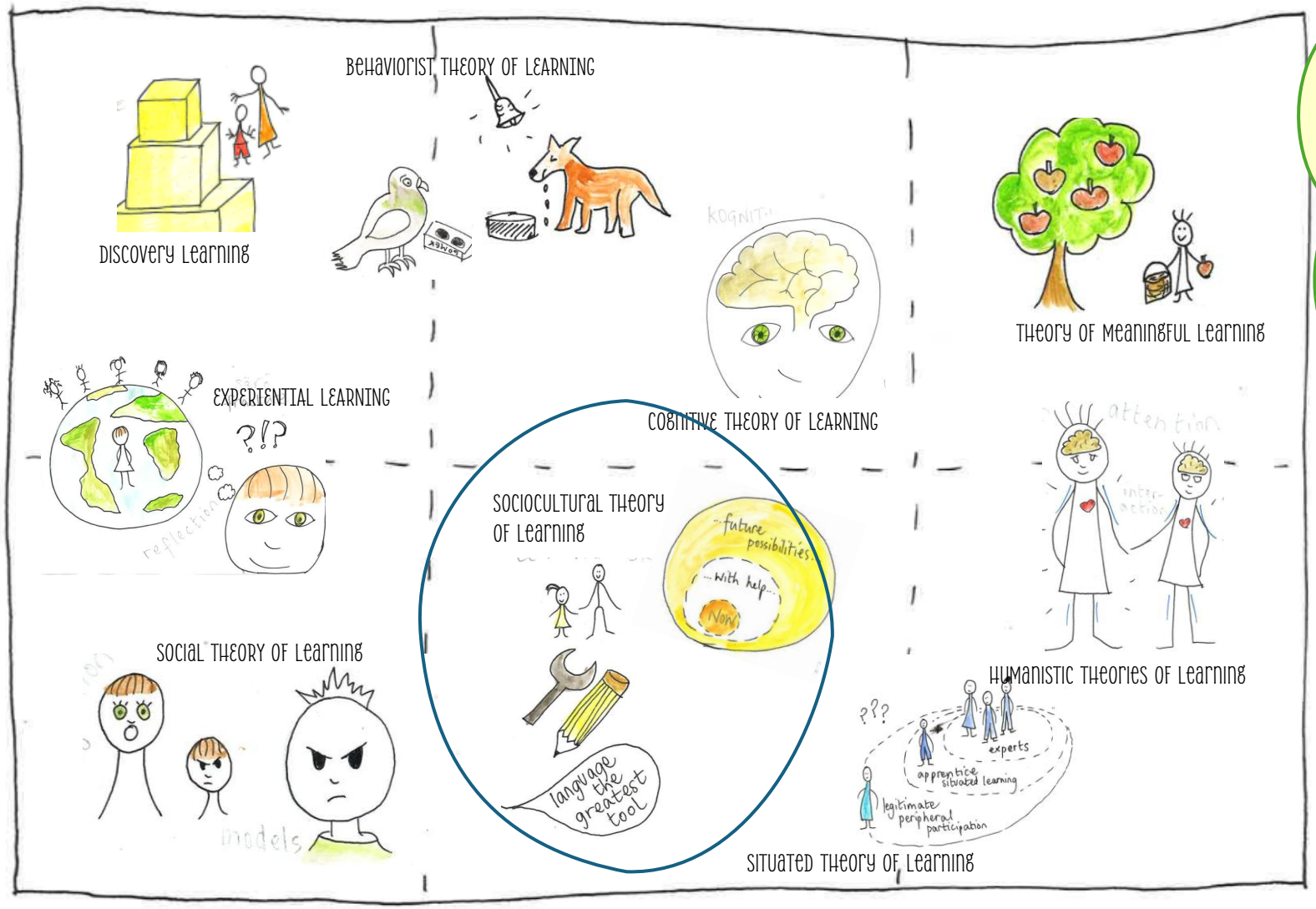


- Based on Piaget's conceptual schemas, i.e. building on or rearranging what is known ' the most important condition of learning was what the learner had already learned because learning was about connecting new impulses with existing mental structure' (Illeris, 2018: 89)

- Learning is:
  - active
  - constructive
  - cumulative - the first element of a learning scheme
  - self-regulated
  - goal-oriented



Another constructivist view!



Constructivism is an umbrella term that is used in relation to several different theories. **Constructivism** highlights the active role of a student in their learning. What other theories does this apply to?

Sociocultural
Cultural history theory of learning

Lev Vygotsky (1896-1934)



https://en.wikipedia.org/wiki/Lev_Vygotsky



- Learning takes place on 2 planes:
  - On the social plane *between* people (inter)
  - On the individual place *within* a person (intra)
- Tools mediate cultural knowledge and practices across time and space
- Gradually everyday concepts and understanding transform into scientific concepts and understanding
- **Learning leads development**

The ZoPed –the zone of proximal development
Lähikehityksen vyöhyke



- The zone in which a child goes beyond his/her current level of development with the help of **an expert other**
- The ZoPed is dynamic (it moves, changes) and is sensitive, it is personal, individual
- A child needing the most help has the most potential
- Assessment should be forward looking, not just assessing what development is ’finished’
- Cultural tools are an important way of sharing knowledge and language is the ultimate tool

A related concept – scaffolding (Bruner, Wood & Ross, 1976)

- Lit. '**rakennustelineet**', käännös Oppimisen **oikea-aikainen tuki**
- Temporary support
- Can be provided through activities, guidance, instructions, example, materials…
- Interaction is crucial - vuorovaikutus

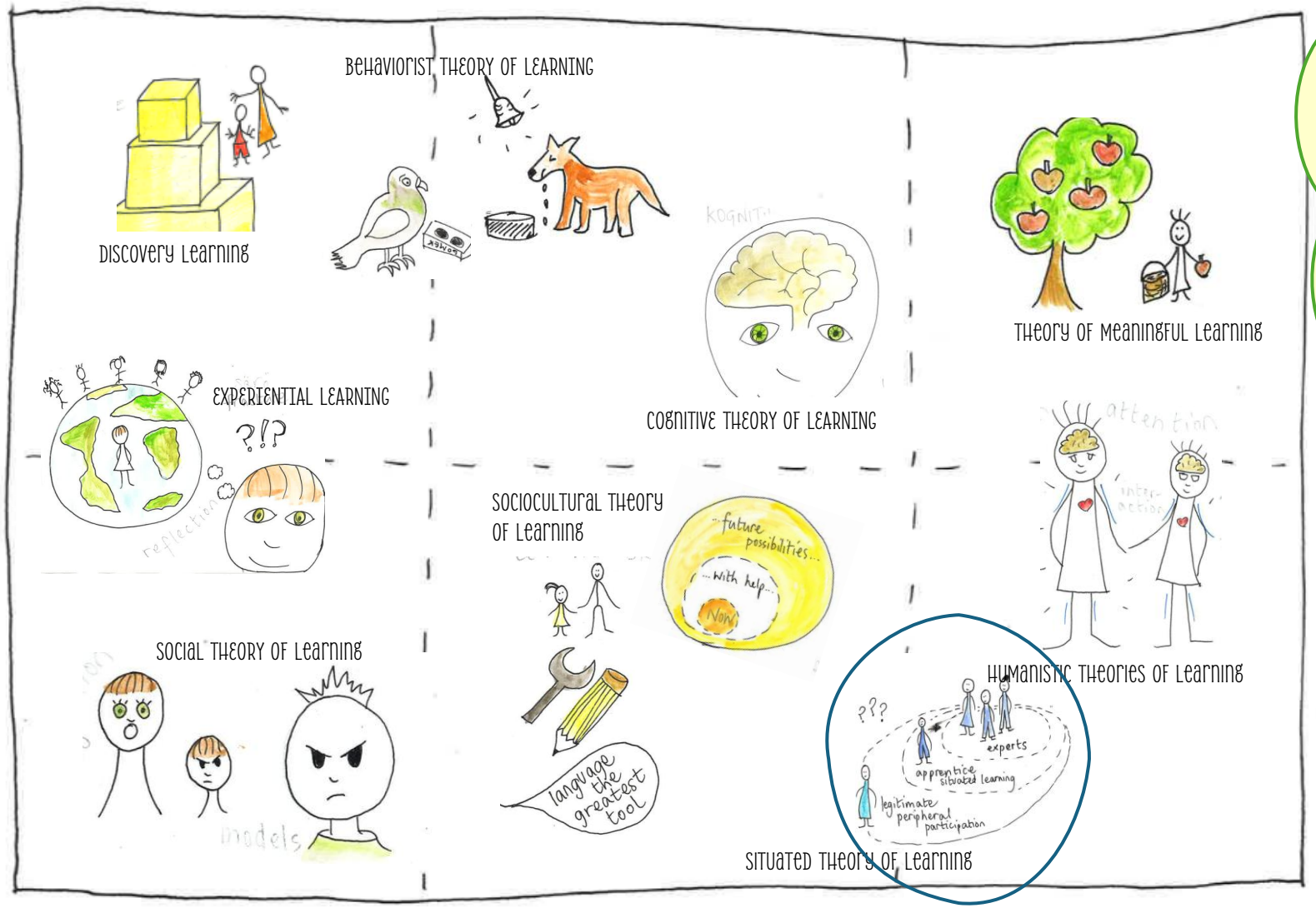


Constructivist swimming from a Vygotskian perspective



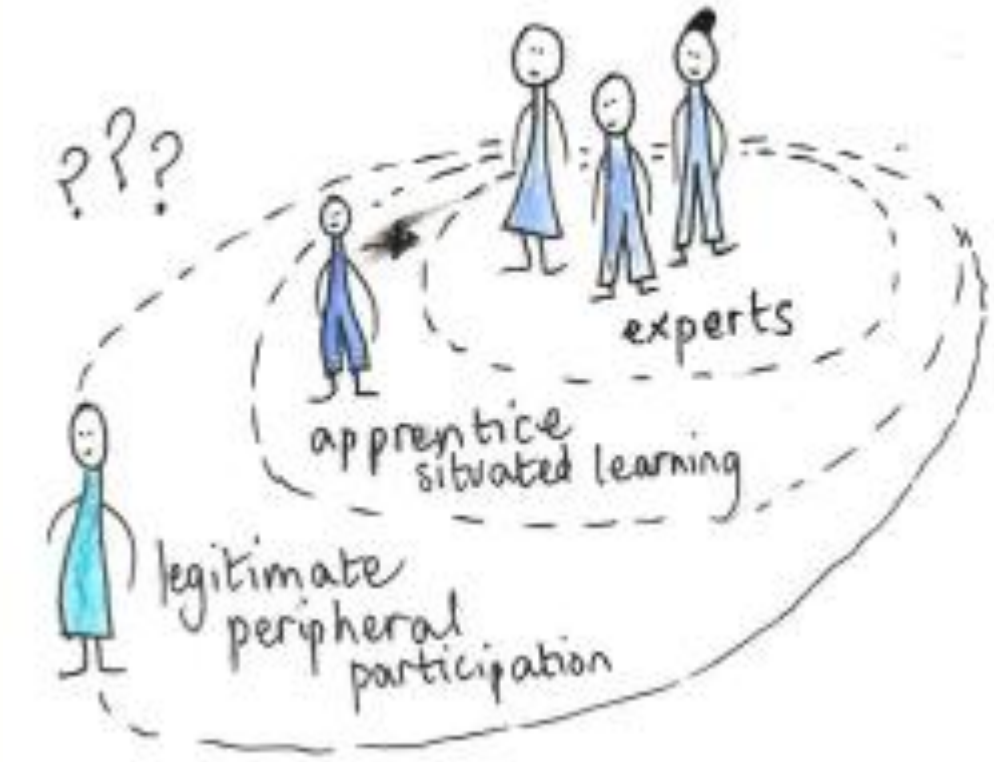
- starting point depends on the existing skills of the individual but doesn't depend on being 'ready'
- **tools** are used to help students understand what is involved in swimming, e.g. floats as supports,
- **language** helps conceptualise what is involved in swimming, e.g. being a rocket in the water and launching from the wall, pointing toes down or pointing toes straight

An apprenticeship oriented view



A **situated** theory of learning highlights the importance of the context – where learning takes place and the authenticity of a particular skill or understanding in this place.

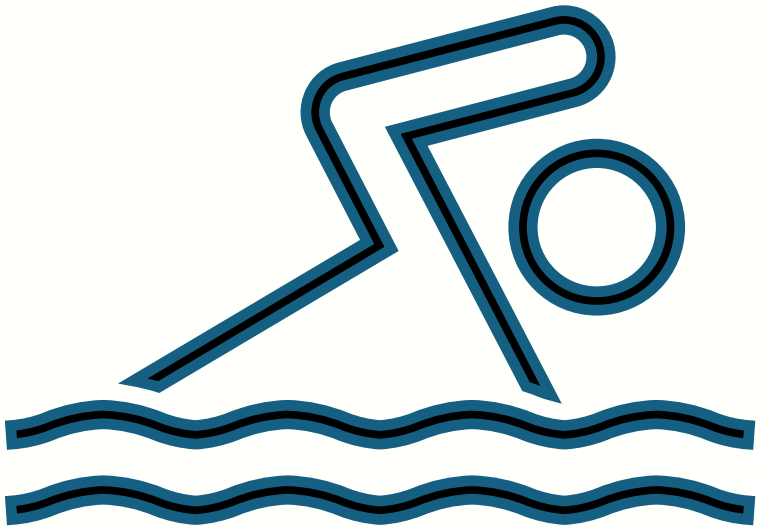
Community of Practice (Lave & Wenger, 1991)
Käytäntöyhteisö / oppiva yhteisö



Key features:
1. Joint enterprise – shared
2. Social entity – belonging, membership
3. Shared repertoire – communal resources
4. Expert-novice – **asiantuntija ja oppipoika**

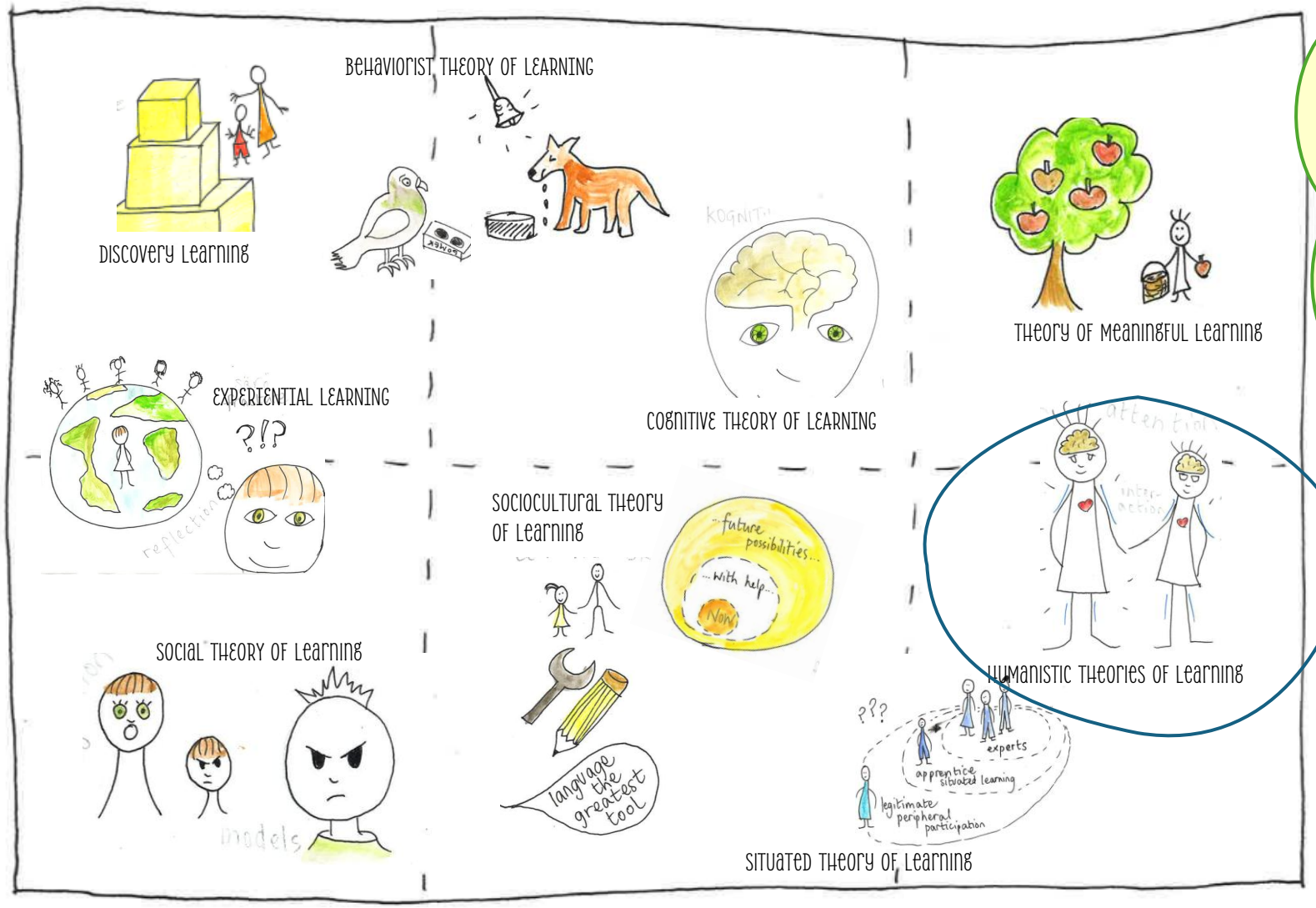
Important terms:
Oppomisympäristö/learning environment
Kulttuuri/culture
Authenticity
Situated - **tilannesidonnaisuus**
Formal and informal learning/ formaali & informaali
intentional & incidental learning / tarkoitettu & tahaton

A Community of Practice for swimming



- Let’s start by watching the experts
- Don’t start in the deep water! Stay in the shallow water until you have developed the basic skills
- Keep practising, you’ll get better over time and listen to expert advice
- At some point you might find you are good enough to help someone else learn how to swim!

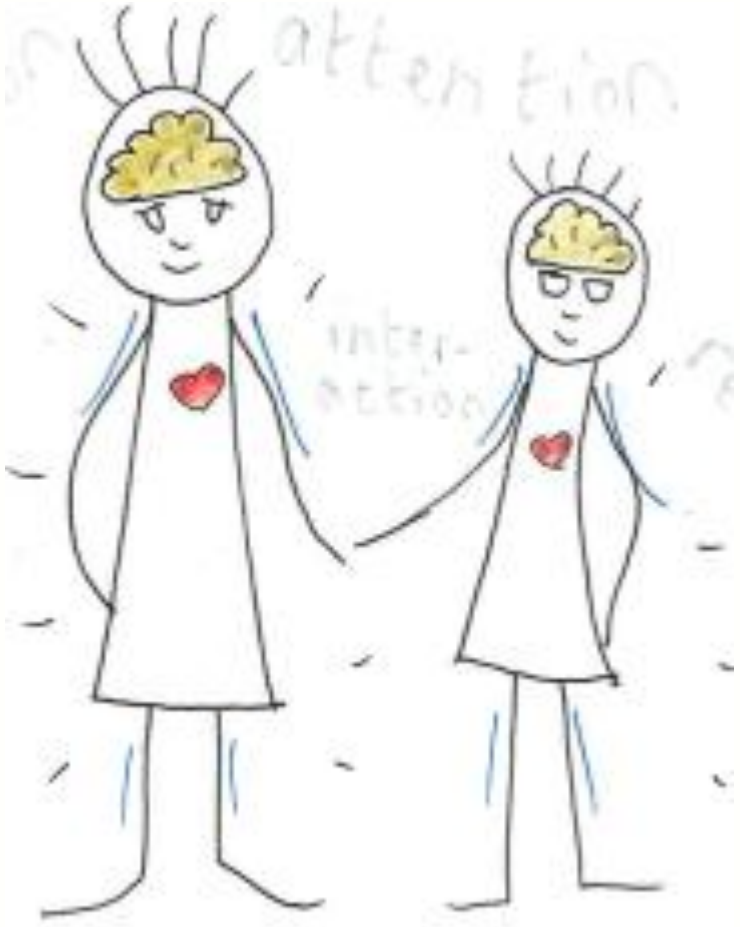
A more holistic view?



Humanistic theories recognise that minds, bodies, emotions and the senses all inform how and what learning takes place. Humanistic theories of learning help bring the **human** to the fore.

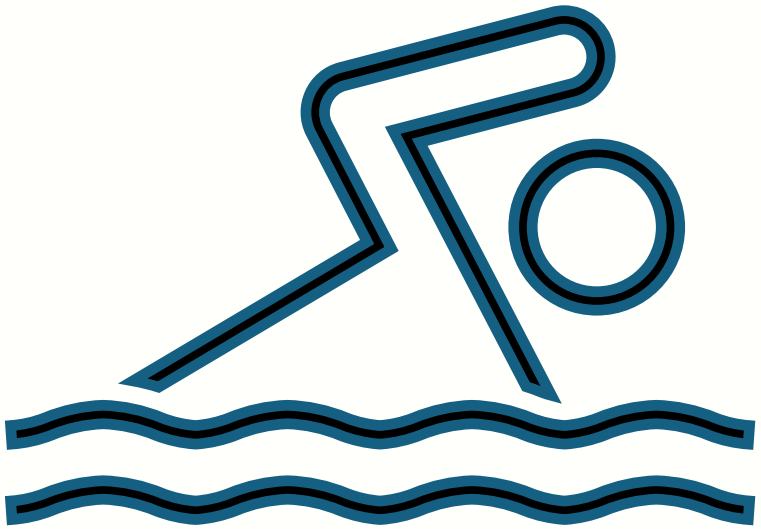
Embodied learning
Kehollinen tieto ajattelu

(Prof. Eeva Anttila)



- Brains and minds, all cognitive activity is connected with a body, a body **situated** in the world
- People first come to know through their body – feeling & sensing, perceiving & attending, interacting & reasoning
- N.b. **Käsite, käsittää, käsitys**
- Embodied learning goes beyond language - the body is involved in cognition
- Self-regulation, motivation, goal-orientation and the aesthetic are important

Embodied learning and swimming



- recognised benefits for body and brain
- rhythmic, simultaneity
- memory and focus
- multisensory, including listening, vocabulary development, communication
- reduces stress and helps regulate emotions
- boosts confidence and resilience, stamina and strength
- Swimming together is even better ☺

Definitions – not answers…

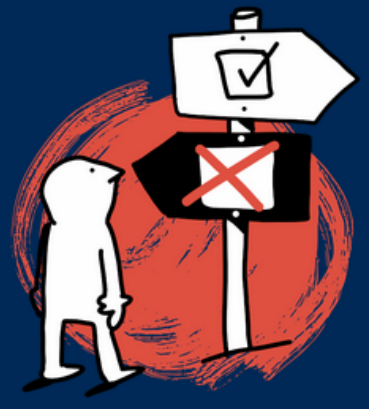
Oppiminen

Oppiminen voidaan määritellä monella tavalla. Näkökulmasta riippuen se on 1) tahatonta sopeutumista ympäristöön, käyttäytymisen muutosta (behavioristinen näkökulma), 2) käsitteiden ja monimutkaisten taitojen tarkoituksellista omaksumista (kognitiivinen näkökulma) 3) vuorovaikutuksessa tapahtuvaa kulttuuristen toimintakäytänteiden muutosta ja niihin osallistumista (sosiokulttuurinen näkökulma) (Lehtinen, Vauras & Lerkkanen, 2016, 87—88).



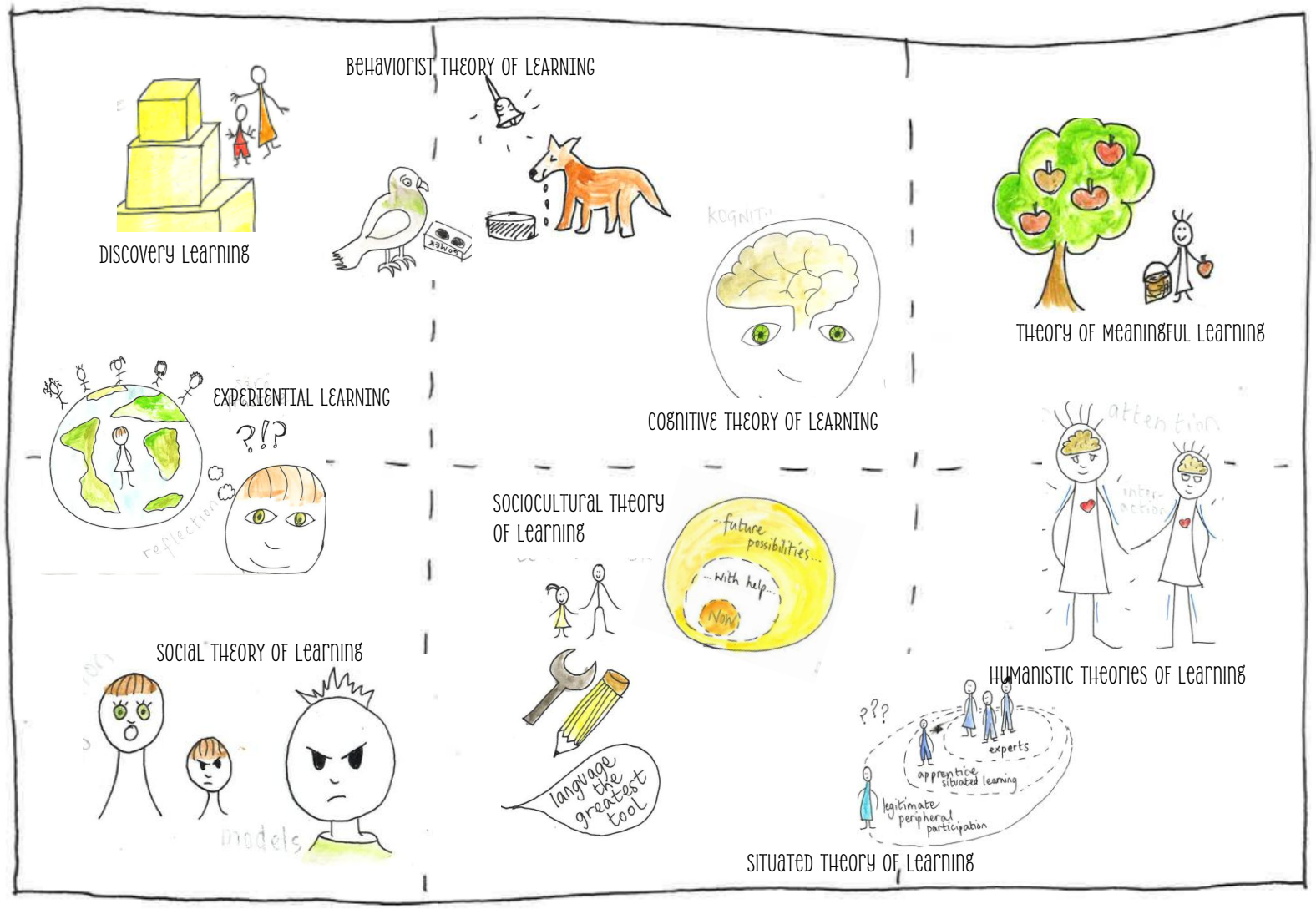
Oppimisen ohjaaminen

Oppimisen ohjaaminen on oppimisen edistämistä joko koulutusinstituutioissa tai niiden ulkopuolella, esimerkiksi työssä tai harrastuksissa. Oppimisen ohjaamisessa sisällön ohella tai sen sijaan tavoitteissa painottuvat oppimaan oppimisen taidot. Toiminnassa keskeistä on oppimisprosessin ohjaaminen, vuorovaikutus, oppijoiden aloitteisiin tarttuminen, oppijan motivaation ja aktiivisuuden tukeminen sekä yksilöllisiin tarpeisiin vastaaminen (Lehtinen, Vauras & Lerkkanen 2016, 220—222).



https://edumap.jyu.fi/oppiminenKasite.html

How is learning viewed ...



... from different theoretical perspectives? What is learning in behaviorism? What is learning from a cognitive perspective?



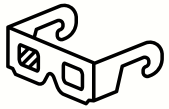
Pohdintaa yksin/pienryhmissä (n. 3 min.)

- Miten määrittelisit oppimisen eri teoreettisten linssien läpi?
- Mitä oppiminen sinun mielestäsi on? Miten määrittelisit oppimisen? **What about now -** how would you define learning?
- What new questions do you now have about theories of learning and ’learning’ ?











Consider so far your university experience

- What have you discovered? How?
- What have you experienced? How?
- What have you been conditioned to do? Expect? How?
- What have you observed and realised?
- What have you reflected on? Why? How?

How can different theories of learning help you to explain what has been part of – or missing from – your learning journey so far?

Further prompt questions considering your experience of studying in higher education:

- What kind of cognitive activity has been going on?
- What has been meaningful to you? What has that involved?
- What new cultural practices have you encountered?
- How would you describe your ZoPed for learning?!

You could then consider how you have developed as a learner – or student – how did you learn as a child? What helped or hindered you? What difference has the environment or relationships made? What about evaluations that have been part of your learning journey? Understanding your own journey is helpful as you continue studying, but remember no two learning journeys are exactly the same and sometimes we learn things it would be better to not learn…

A final provocation…



- Educational theorist Gert Biesta argues that the relationship between teaching and learning is *structurally broken* (Biesta, 2022, p.57)
- The words and actions of educators cannot guarantee precise learning outcomes or guarantee that everyone learns the same thing - but this is a good thing…
- The words and actions of educators do make a difference, but so do the words and actions of students. What you do makes a difference to what is learnt – but even then, you can’t guarantee what you will learn. There will always be surprises on the way!

References

- Anttila, E. (2015). Embodied learning in the arts. *International Yearbook for Research in Arts Education*, *3*(2015), 372-377.
- Biesta, G. (2005). Against learning. Reclaiming a language for education in an age of learning. *Nordic Studies in Education*, *25*(1), 54-66.
- Biesta, G. (2021). *World-centred education: A view for the present*. Routledge.
- Bruner, J. (2004). A short history of psychological theories of learning. *Daedalus*, *133*(1), 13-20.
- Illeris, K. (2018). An overview of the history of learning theory. *European Journal of Education*, *53*(1), 86-101.
- James, W. (1958). *Talks to teachers* (p. 106). New York: Norton.
- Kinchin, I. (2004). Investigating students' beliefs about their preferred role as learners. *Educational research*, *46*(3), 301-312.
- Morris, T. H. (2020). Experiential learning–a systematic review and revision of Kolb's model. *Interactive learning environments*, *28*(8), 1064-1077.
- Schlinger, H. D. (2022). The impact of BF Skinner's science of operant learning on early childhood research, theory, treatment, and care. In *The influence of theorists and pioneers on early childhood education* (pp. 101-118). Routledge.