

# LEARNING & EDUCATION THEORY CHEAT SHEET

## LEARNING THEORY: HOW PEOPLE LEARN?

(psychology of learning)

**Behaviorism** (Watson & Skinner): New behaviors are acquired through associations between stimuli and response.

**Cognitivism**: Learning happens through internal processing of knowledge.

**Constructivism** (Dewey, Papert): Learning happens by constructing knowledge through activity and personal experience.

**Activity theory** (Vygotsky, Engeström): Memorizing can only happen through activation.

**Experiential learning** (Kolb): Learning happens when personal experience is reflected against previous knowledge.

**Social cognitive theory** (Bandura): People learn not only by trial and error but by observing other people doing things.

**Socio-cultural / social interactionist theory** (Vygotsky, Säljö): Learning is shaped by social interactions and communication.

**Anamnesis** (Plato): Learning happens when we recall reflections of ideas that we forgot when we were born.

## EDUCATIONAL THEORY: HOW SHOULD WE HELP LEARNING?

(educational science, pedagogy)

**Didactic teaching**: Teaching should follow pre-planned formula to make sure all information will be covered.

**Steiner pedagogy** (Steiner): Teaching should be holistic, connecting intellectual, artistic and practical aspects.

**Critical pedagogy** (Freire): Learners should self create the context and pick the material for learning. Education is always political, teacher's role should be minimal.

**De-schooling** (Illich): We should not teach. Genuine learning is only possible in freedom.

**Montessori pedagogy** (Montessori): Learners should be free to choose learning content within a prepared environment. Multi-age groups & personalized paths.

**Problem-based learning**: Learning is based on solving practical real-world problems pre-fabricated by the teacher.

**Inquiry-based learning** (Lonka): Learners should be free to inquire and study the topic through their own activity. Role of teacher is to motivate.

**Personalized learning** (Peura, Kallio): Learner should self take control over the pace and difficulty of learning. This way motivation & activation grows. Peer-learning is encouraged.

**Blended learning / e-learning**: Learning should happen at least partly through digital tools because it is the natural medium of today's learners.

**Connectivism** (Siemens): Learning happens within and across networks.

## EDUCATIONAL AIMS: WHAT SHOULD BE LEARNED?

(philosophy of education, politics)

**Liberal education** (fin. yleissivistävä koulutus): Classical subjects such as arts, humanities, math, science.

**Arts & crafts**: creating beautiful things with own hands.

**Vocational education / worklife skills**: manufacturing or other skills that are needed in industry or worklife in general.

**STE(A)M**: Science, Technology, Engineering, (Arts) & Math

**Self-realization**: Humanist education aims at learner self-realization, becoming one's 'true self'

**21st century skills / 4 C skills**: Typically includes creativity, collaboration, critical thinking, communication & learning skills

**Life skills**: like 21st century skills, but emphasizes emotional and social skills

**Phenomenon based learning**: Phenomenons of the world, rather than traditional subjects or specific skills

**Character strengths**: grit, kindness, growth mindset etc.

**Citizenship skills**: skills and attitudes that sustain society or democracy.