HoTEL Holistic Approach to Technology Enhanced Learning

Innovators – Opinions – Perspectives

Learning Theory

Learning Theory v45
isa hypertextual concept map
of established learning theories
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This is necessarily a
reduction of a complete
picture of learning theories,
but nevertheless it attempts
to map and link key scientific
disciplines, theorists,
concepts and paradigms.

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Key concepts

Learning paradigms or 'world views'

Learning theorists

Scientific disciplines

Philosophy

Psychology

Education

Organisation

Cybernetics

Linguistics

Social anthropology

social constructivism

The learner is not a passive recipient of knowledge but that knowledge is 'constructed' by the learner in some way.

Knowledge as consensual domain.

radical constructivism

Knowledge as mental representation:
1a. Knowledge is not passively received either through the senses or by way of communication;
1b. Knowledge is actively built up by the cognising subject;
2a. The function of cognition is adaptive, in the biological sense of the term, tending towards fit or viability;
2b Cognition serves the subject's organization of the experiential world, not the discovery of an objective ontological reality.

constructivism

The process that occurs between a teacher and student that infuses direct experience with the learning environment and content.

constructionism

Education based on science that modified and improved the individual.

scientific pedagogy

Principles:
1. Mixed age classrooms, with classrooms for children aged 2½ or 3 to 6 years old;
2. Student choice of activity from within a prescribed range of options;
3. Uninterrupted blocks of work time;
4. A Constructivist or "discovery" model, where students learn concepts from working with materials, rather than by direct instruction.

experiential education

genetic epistemology

A human being develops cognitively from birth throughout his or her life through four primary stages of development: sensorimotor (0-2), preoperational (2-7), concrete operational (7-11), and formal operational (11-). Assimilition is incorporation new experiences into existing mental schema, accommodation changes mental schema.

zone of proximal development

The area of capabilities that learners can exhibit with support from a teacher.

scaffolding

Scaffolding is the support given during the learning process which is tailored to the needs of the student with the intention of helping the student achieve his/her learning goals.

discovery learning

Learners obtain knowledge by forming and testing hypotheses.

meaningful learning

New knowledge to acquire is related with previous knowledges.

mastery learning

In Mastery learning, "the students are helped to master each learning unit before proceeding to a more advanced learning task".

educational objectives

Taxonomy of learning objectives that educatorsset for students in three "domains": Cognitive, Affective, and Psychomotor. Learning at the higher levels is dependent on achieving lower levels. Designed to motivate educators to focus on all three domains, creating a more holistic form of education.

Montessori education

Montessori

Teacher types: lion-tamer, entertainer and new romantic - the problem of self-judgement in assessment.

interpersonal relations

Hargreaves

An educational movement, guided by passion and principle, to help students develop consciousness of freedom, recognize authoritarian tendencies, and connect knowledge to power and the ability to take constructive action.

critical pedagogy

Freire

Dewey

von Glasersfeld

Piaget

Vygotsky

Bruner

Ausubel

Bloom

Skinner

radical behaviourism

Learning as a process of forming associations between stimuli in the environment and the corresponding responses of the individual. Reinforcement strengthens responses and increases the likelihood of another occurrence when the stimulus is present again.

Learn naturally if given the freedom to follow own interests and a rich assortment of resources.

homeschooling, unschooling

Holt

School is damaging to education: "The pupil is thereby 'schooled' to confuse teaching with learning, grade advancement with education, a diploma with competence, and fluency with the ability to say something new."

de-schooling society

Illich

Lave & Wenger

communities of practice

groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly

situated learning

Optimal learning demands that students receive instruction tailored to their learning styles.

learning styles

Fleming

Honey & Mumford

Kolb

Pask

conversation theory

a cybernetic and dialectic framework that offers a scientific theory to explain how interactions lead to 'knowing'

Knowledge is continuously gained through both personal and environmental experiences. The learner must:
1. be able to reflect on the experience;
2. use analytical skills to conceptualize the experience; and
3. make decisions and solve problems to use the ideas gained from the experience.

experiental learning

We have several different ways of learning and processing information, but these methods are relatively independent of one another: leading to multiple "intelligences" as opposed to a general intelligence factor among correlated abilities

multiple intelligences

Gardner

who?

instructivism

Teachers takes a central role and transfer their knowledge directly to students.