HoTEL Holistic Approach to Technology Enhanced Learning

Innovators – Opinions – Perspectives

Learning Theory

Learning Theory v6
is a 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

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.

Education based on science that modified and improved the individual.

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

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.

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

groups construct knowledge for one another, collaboratively creating a small culture of shared artifacts with shared meanings

knowledge is distributed across a network of connections to people and information -
learning consists of the ability to construct and traverse those networks

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 of new experiences into existing mental schema, accommodation changes mental schema.

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

The learning of new forms of activity as they are created, rather than the mastery of putative stable, well-defined, existing knowledge and skill.

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.

Learners obtain knowledge by forming and testing hypotheses.

New knowledge to acquire is related with previous knowledges.

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

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

Taxonomy of learning objectives that educators set 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.

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.

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

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.

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

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."

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

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.

Modifying the goal of learning activity in the light of experience or possibly even reject the goal. Single-loop learning is the repeated attempt at the same problem, with no variation of method and without ever questioning the goal.

A characteristic of an adaptive organization that is able to sense changes in signals from its environment and adapt accordingly.

An organization is created and defined by communication. communication "is" the organization and the organization exists because communication takes place.

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

Learning is a social process whereby knowledge is co-constructed and is situated in a specific context and embedded within a particular social and physical environment.

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.

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

constructionism
connectivism
social constructivism
expressive constructivism
radical constructivism
constructivism
genetic epistemology
zone of proximal development
scientific pedagogy
experiential education
Millwood
von Glasersfeld
Piaget
expansive learning
interpersonal relations
Montessori education
Dewey
Vygotsky
scaffolding
critical pedagogy
Montessori
Engeström
discovery learning
Hargreaves
homeschooling, unschooling
Freire
Design
Cybernetics
Bruner
meaningful learning
Philosophy
de-schooling society
Holt
Linguistics
Ausubel
Illich
Psychology
Gardner
multiple intelligences
Education
learning styles
Fleming
Bloom
mastery learning
Honey & Mumford
experiential learning
Organisation
Theology
The church
Skinner
educational objectives
Kolb
instructivism
double loop learning
Argyris & Schön
radical behaviourism
organisational learning
Nonaka & Takeuchi
text & conversation theory
Taylor
Social anthropology
Pask
conversation theory
Lave & Wenger
situated learning
communities of practice