

LESSON 7

Learning and Development

- Theories of Learning
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Training and Development

Coaching and Mentoring

(are transferred to week 9)

DEFINITIONS

What is a theory?

A general principle that explains or predicts facts, observations or events.

A theory is generally accepted as valid having survived repeated testing.

Note: A theory can never be established beyond all doubt.

What is a model?

A model is a theoretical construct or mental picture that helps one understand something that cannot easily be observed or experienced directly.

What is epistemology?

Epistemology is the study that explores the nature of knowledge (from the Greek word episteme, i.e. that which we know). It answers the questions: how can we come to know things and be certain of what we know?

What is ontology?

Ontology is the study that describes the nature of the world and reality (from the Greek word ontos, i.e. that which exists). Day-to-day science is concerned with ontos. It considers the questions: what is fundamental? What is real, and what is not?

What is axiology?

Axiology is the study of values. What is considered important, and what values do an individual or group hold and why?

What are Learning Theories?

Learning theories are conceptual frameworks that describe how information is absorbed, processed, and retained during learning. Learning brings together cognitive, emotional, and environmental influences and experiences for acquiring, enhancing, or making changes in one's knowledge, skills, values, and world views.

There are **four main categories of learning theory**:

- 1) Behaviorism
- 2) Cognitivism
- 3) Constructivism
- 4) Humanism

Behaviourism

- focuses only on the objectively observable aspects of learning.
- Behaviorism is a worldview that operates on a principle of “stimulus-response.” All behavior caused by external stimuli (operant conditioning). All behavior can be explained without the need to consider internal mental states or consciousness.

Behaviorism is a worldview that assumes a learner is essentially passive, responding to environmental stimuli. The learner starts off as a clean slate (i.e. tabula rasa) and behavior is shaped through positive reinforcement or negative reinforcement. Both positive reinforcement and negative reinforcement increase the probability that the antecedent behavior will happen again. In contrast, punishment (both positive and negative) decreases the likelihood that the antecedent behavior will happen again. Positive indicates the application of a stimulus; Negative indicates the withholding of a stimulus. Learning is therefore defined as a change in behavior in the learner. Lots of (early) behaviorist work was done with animals (e.g. Pavlov's dogs) and generalized to humans.

Cognitive Theories

- Look beyond behaviour to explain brain-based learning.
- essentially argues that the “black box” of the mind should be opened and understood. The learner is viewed as an information processor (like a computer).

The cognitivist revolution replaced behaviorism in 1960s as the dominant paradigm. Cognitivism focuses on the inner mental activities – opening the “black box” of the human mind is valuable and necessary for understanding how people learn. Mental processes such as thinking, memory, knowing, and problem-solving need to be explored. Knowledge can be seen as schema or symbolic mental constructions. Learning is defined as change in a learner's schemata.

In contrast/response to behaviorism, people are not “programmed animals” that merely respond to environmental stimuli; people are rational beings that require active participation in order to learn, and whose actions are a consequence of thinking. Changes in behavior are observed, but only as an indication of what is occurring in the learner's head. Cognitivism uses the metaphor of the mind as computer: information comes in, is being processed, and leads to certain outcomes.

Constructivism

- views learning as a process in which the learner actively constructs or builds new ideas or concepts.
- Constructivism as a paradigm or worldview posits that learning is an active, constructive process. The learner is an information constructor. People actively construct or create their own subjective representations of objective reality. New information is linked to prior knowledge, thus mental representations are subjective.

Constructivism is a reaction to didactic approaches such as behaviorism and programmed instruction; constructivism states that learning is an active, contextualized process of constructing knowledge rather than acquiring it. Knowledge is constructed based on personal experiences and hypotheses of the environment. Learners continuously test these hypotheses through social negotiation. Each person has a different interpretation and construction of knowledge process. The learner is not a blank slate (tabula rasa) but brings past experiences and cultural factors to a situation.

A common misunderstanding regarding constructivism is that instructors should never tell students anything directly but, instead, should always allow them to construct knowledge for themselves. This is actually confusing a theory of pedagogy (teaching) with a theory of knowing. Constructivism assumes that all knowledge is constructed from the learner's previous knowledge, regardless of how one is taught. Thus, even listening to a lecture involves active attempts to construct new knowledge.

Vygotsky's social development theory is one of the foundations for constructivism.

Humanism

- Humanism is a paradigm/philosophy/pedagogical approach that believes learning is viewed as a personal act to fulfil one's potential.

Key proponents: Abraham Maslow, Carl Rogers, Malcolm Knowles

Key terms: self-actualization, teacher as facilitator, affect

Humanism, a paradigm that emerged in the 1960s, focuses on the human freedom, dignity, and potential. A central assumption of humanism, according to Huitt (2001), is that people act with intentionality and values. This is in contrast to the behaviorist notion of operant conditioning (which argues that all behavior is the result of the application of

consequences) and the cognitive psychologist belief that the discovering knowledge or constructing meaning is central to learning.

Humanists also believe that it is necessary to study the person as a whole, especially as an individual grows and develops over the lifespan. It follows that the study of the self, motivation, and goals are areas of particular interest.

Major Learning Theories:

Behaviorist Theories:

- *Classical Conditioning (Pavlov)*
- GOMS Model (Card, Moran, and Newell)
- *Operant Conditioning (Skinner)*
- Social Learning Theory (Bandura)

Cognitivist Theories:

- Assimilation Theory (Ausubel)
- Attribution Theory (Weiner)
- Cognitive Load Theory (Sweller)
- Cognitive Theory of Multimedia Learning (Mayer)
- Component Display Theory
- Elaboration Theory (Reigeluth)
- Gestalt Psychology (Tolman)
- Mental Models (Johnson-Laird)
- Schema Theory
- *Stage Theory of Cognitive Development (Piaget)*

Constructivist, Social, and Situational Theories:

- Cognitive Apprenticeship (Collins et al.)
- Communities of Practice (Lave and Wenger)
- *Discovery Learning (Bruner)*
- *Social Development Theory (Vygotsky)*
- Problem-Based Learning (PBL)
- Situated Learning (Lave)

Motivational and Humanist Theories:

- ARCS Model of Motivational Design (Keller)
- *Emotional Intelligence (Goleman)*
- *Experiential Learning (Kolb)*
- *Maslow's Hierarchy of Needs (Maslow)*
- Self-Determination Theory (Deci and Ryan)

Lesson seven (7) must be supported by the following media.

The links to these can also be accessed from our DistantEdu Portal:

FOR LECTURE SUPPORT

Lesson notes

[Influencing organisational behaviour through the application of learning theories](#)

- It is important to read this article prior to attending the class for lesson 7 as this can be a challenging topic without texts or other literature for support.

FOR TUTORIAL

- [Behaviourism 101](#)
- [Enactment of four teachers each representing contrasting views of the theories of learning, in a presentation to their Principal on how they should teach Johnny Spelling.](#)

1. [Pavlov's dogs and skimmers, and BF Skinner, Radical behaviorism](#)

To find the embedded video scroll down all the way to the bottom of the page.

REFERENCES

<http://www.learning-theories.com/humanism.html>

<http://www.simplypsychology.org/pavlov.html>