**LEARNING THEORIES**

**Learning theories** are [conceptual frameworks](http://en.wikipedia.org/wiki/Conceptual_framework) describing how information is absorbed, processed, and retained during [learning](http://en.wikipedia.org/wiki/Learning). Cognitive, emotional, and environmental influences, as well as prior experience, all play a part in how understanding, or a world view, is acquired or changed and knowledge and skills retained.

**BEHAVIORISM**

The term "behaviorism" was coined by [John Watson](http://en.wikipedia.org/wiki/John_B._Watson) (1878–1959). Watson believed the behaviorist view is a purely objective experimental branch of natural science with a goal to predict and control behavior. Behaviorism is concerned with behavior than with thinking, feeling, or knowing. It focuses on the objective and observable components of behavior. The behaviorist theories all share some version of [stimulus-response](http://www.lifecircles-inc.com/Learningtheories/glossary.html) mechanisms for learning. It is a philosophy of learning that only focuses on objectively observable behaviors and discounts mental activities. Behavior theorists define learning as nothing more than the acquisition of new behavior.

Experiments by behaviorists identify conditioning as a universal learning process. There are two different types of conditioning, each yielding a different behavioral pattern:

* Classic conditioning occurs when a natural reflex responds to a stimulus.

The most popular example is Pavlov's observation that dogs salivate when they eat or even see food. Essentially, animals and people are biologically "wired" so that a certain stimulus will produce a specific response.

* Behavioral or operant conditioning occurs when a response to a stimulus is reinforced.

Basically, operant conditioning is a simple feedback system: If a reward or reinforcement follows the response to a stimulus, then the response becomes more probable in the future. For example, leading behaviorist B.F. Skinner used reinforcement techniques to teach pigeons to dance and bowl a ball in a mini-alley.

**COGNITIVE LEARNING THEORY**

The Cognitive Learning Theory explains why the brain is the most incredible network of information processing and interpretation in the body as we learn things.When we say the word “learning”, we usually mean “to think using the brain”. This basic concept of learning is the main viewpoint in the Cognitive Learning Theory. The theory has been used to explain mental processes as they are influenced by both intrinsic and extrinsic factors, which eventually bring about learning in an individual.

Cognitive Learning Theory implies that the different processes concerning learning can be explained by analyzing the mental processes first. It posits that with effective cognitive processes, learning is easier and new information can be stored in the memory for a long time. On the other hand, ineffective cognitive processes result to learning difficulties that can be seen anytime during the lifetime of an individual.

This theory can be divided into two specific theories: the Social Cognitive Theory (SCT), and the Cognitive Behavioral Theory (CBT).

## A. Social Cognitive Theory

In the Social Cognitive Theory, we are considering 3 variables:

* behavioral factors
* environmental factors (extrinsic)
* personal factors (intrinsic)

These 3 variables in Social Cognitive Theory are said to be interrelated with each other, causing learning to occur. An individual’s personal experience can converge with the behavioral determinants and the environmental factors.

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| Social Cognitive Theory |
| Social Cognitive Theory Illustration (Pajares, 2002) |

In the person-environment interaction, human beliefs, ideas and cognitive competencies are modified by external factors such as a supportive parent, stressful environment or a hot climate. In the person-behavior interaction, the cognitive processes of a person affect his behavior; likewise, performance of such behavior can modify the way he thinks. Lastly, the environment-behavior interaction, external factors can alter the way you display the behavior. Also, your behavior can affect and modify your environment. This model clearly implies that for effective and positive learning to occur an individual should have positive personal characteristics, exhibit appropriate behavior and stay in a supportive environment.

In addition, Social Cognitive Theory states that new experiences are to be evaluated by the learner by means of analyzing his past experiences with the same determinants. Learning, therefore, is a result of a thorough evaluation of the present experience versus the past.

## B. Cognitive Behavioral Theory

Cognitive Behavioral Theory describes the role of cognition (knowing) to determining and predicting the behavioral pattern of an individual. This theory was developed by Aaron Beck.

The Cognitive Behavioral Theory says that individuals tend to form self-concepts that affect the behavior they display. These concepts can be positive or negative and can be affected by a person’s environment.

 **CONSTRUCTIVISM**

Constructivism is an educational philosophy which holds that learners ultimately construct their own knowledge that then resides within them, so that each person's knowledge is as unique as they are. Among its key precepts are:

* situated or anchored learning, which presumes that most learning is context-dependent, so that cognitive experiences situated in authentic activities such as project-based learning;
* cognitive apprenticeships, or case-based learning environments result in richer and more meaningful learning experiences;
* social negotiation of knowledge, a process by which learners form and test their constructs in a dialogue with other individuals and with the larger society. collaboration as a principal focus of learning activities so that negotiation and testing of knowledge can occur.

**The guiding principles of Constructivism:**

* Learning is a search for meaning. Therefore, learning must start with the issues around which students are actively trying to construct meaning.
* Meaning requires understanding wholes as well as parts. And parts must be understood in the context of wholes. Therefore, the learning process focuses on primary concepts, not isolated facts.
* In order to teach well, we must understand the mental models that students use to perceive the world and the assumptions they make to support those models.
* The purpose of learning is for an individual to construct his or her own meaning, not just memorize the "right" answers and regurgitate someone else's meaning. Since education is inherently interdisciplinary, the only valuable way to measure learning is to make assessment part of the learning process, ensuring it provides students with information on the quality of their learning.

**BRAIN BASED LEARNING**

This theory is based on the structure and function of the brain. As long as the brain is not prohibited from fulfilling its normal processes, learning will occur.

The core principles of Brain-based Learning state that:

* The brain is a parallel processor, meaning it can perform several activities at once.
* Learning engages the whole physiology.
* The search for meaning is innate.
* The search for meaning comes through patterning.
* Emotions are critical to patterning.
* The brain processes wholes and parts simultaneously.
* Learning involves both focused attention and peripheral perception.
* Learning involves both conscious and unconscious processes.
* We have two types of memory: spatial and rote.
* We understand best when facts are embedded in natural, spatial memory.
* Learning is enhanced by challenge and inhibited by threat.
* Each brain is unique.

**SOCIAL LEARNING THEORY**

This theory says that learning occurs when an observer's behavior changes after viewing a behavioral model. An observer's behavior can be affected by the positive or negative consequences - called vicarious reinforcement or vicarious punishment - of a model's behavior.

Learning by observation involves four separate processes:

* + **Attention:** Observers cannot learn unless they pay attention to what's happening around them. This process is influenced by characteristics of the model, such as how much one likes or identifies with the model, and by characteristics of the observer, such as the observer's expectations or level of emotional arousal.
	+ **Retention:** Observers must not only recognize the observed behavior but also remember it at some later time. This process depends on the observer's ability to code or structure the information in an easily remembered form or to mentally or physically rehearse the model's actions.
	+ **Production:** Observers must be physically and intellectually capable of producing the act. In many cases the observer possesses the necessary responses. But sometimes, reproducing the model's actions may involve skills the observer has not yet acquired. It is one thing to carefully watch a circus juggler, but it is quite another to go home and repeat those acts.
	+ **Motivation:** In general, observers will perform the act only if they have some motivation or reason to do so. The presence of reinforcement or punishment, either to the model or directly to the observer, becomes most important in this process.

**MULTIPLE INTELLIGENCES**

The existence of multiple intelligences is proposed by psychologist [Howard Gardner](http://en.wikipedia.org/wiki/Howard_Gardner), who suggests that different kinds of intelligence exist in human beings. The theory says that human beings have not just one type of intelligence, but several. Previously intelligence had been defined by measurable results on standardized intelligence tests. One of the main challenges for educators and individuals is for each person to develop his/her intelligences to the fullest. These Intelligences are

1. Linguistic/Verbal
2. Logical-mathematical,
3. Musical,
4. Bodily-kinesthetic,
5. Spatial,
6. Interpersonal, and
7. Intrapersonal.

**Linguistic/Verbal Intelligence**

Perceives and responds to voice tones, tempo, rhythm, and word sounds; imitates language and other sounds such as bird song; learns through listening to spoken word, reading, writing, and discussing; proficient in discussing and explaining in written or spoken words, remembers conversations and lecture material; natural command of the language including subtlety of word choice, pronunciation, and semantics; learns languages easily.
**Logical/Mathematical Intelligence**

Uses abstract symbols easily, good at logical problem solving; formulates and tests hypotheses; uses diverse mathematical skills; enjoys complex operations such as math, physics, or research methods; perceives patterns and relationships among complex components; perceives functions of objects and cause and effect relationships; creates models, hypotheses and theories to explain phenomena.

**Musical Intelligence**

Learns through listening; remembers and responds to a variety of sounds including human voice, environmental sounds, music; recognizes musical styles, collects music or musical information, interest in musical instruments and other sound-making devices; easily distracted by sounds or noise in the environment; finds symbolism in music, expresses ideas and feelings through sound and music; composes music.

**Bodily-kinesthetic Intelligence**

Explores and learns through touch and movement; has a natural sense of coordination, balance, grace dexterity and timing; remembers by doing; enjoys concrete learning such as games, role play, physical exercise, model building, and field trips; responds to physical stimulation; interested in health and care of the physical body; naturally invents new approaches to physical skills such as dance movements, athletic techniques, and other physical activities.

**Visual Spatial Intelligence**

 Learns by watching, observing; recognizes shapes and colors and can reproduce them through artwork; perceives three-dimensional space and his place in it accurately; perceives and produces mental imagery, generates mental images for memory and recall; learns from and encodes information in graphs, charts, diagrams and other graphic or visual representations; enjoys doodling, drawing, painting, designing, and other visual creative activities; easily constructs three dimensional mental images and can move them in space, and can project future configurations.

 **Interpersonal Intelligence**

Bonds and interacts easily with others, forming social relationships; relates to others in a variety of ways; easily perceives the thoughts, feelings, motivations, and behaviors of others; interest in diverse lifestyles of others; participates in team and collaborative efforts easily, has ability to influence opinions and actions of others; a natural leader; easily adapts to new social and physical environments; responds well to feedback from others, effective communicator,
**Intrapersonal Intelligence**

 Aware of his range of emotions, and finds appropriate expression and outlets for them; has a strong personal ethics code; aware of beliefs and values that motivate him; sets goals and works toward them; works independently; curious about deeper questions in life including meaning, relevance, and purpose; manages his own ongoing learning and personal growth; seeks understanding of his inner experiences; strives for self-actualization; has insights into the complexities of himself and others; naturally empowers others and encourages them to introspection and self-understanding.