Main perspectives on learning

BEHAVIOURISM

Here are framed the first explanations of learning, and although we could go back to Aristotle and the principle of contiguity (whenever two or more sensations occur together frequently enough, they will be associated), it is the research of Ivan Pavlov (1920) that consolidated classical conditioning as the central axis of the behaviourist perspective.

•Classical conditioning: through this process, animals (including humans) can be trained to react involuntarily to stimuli that had no effect or a different effect. The result is that the stimulus triggers the response automatic. It is safe to say that this type of learning is involuntary, but obviously not all human learning is involuntary. We also learn deliberately. We call operants the items of behaviour we generate intentionally, and the learning process involved is known as operant conditioning. B.F. Skinner (1953) initially developed this concept.

• Operant conditioning: is the process that causes a response to be modified according to the effects that the environment has on it. The individual operates with his/her environment, thus modifying it while at the same time the environment modifies the individual's behaviour.
1. If the result of an operation is beneficial, that behaviour will be strengthened and will have probability of being repeated.
2. If the result is damaging, the behaviour will disappear.

As a result, subjects learn to obtain or eliminate consequences from the environment.

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Main perspectives on learning

COGNITIVISM

This approach is probably the oldest one, although behaviourism totally overshadowed it from the end of the 19th Century until several decades ago. The cognitive perspective on learning could be described in its origin as a philosophical orientation, since it assumes that mental processes (perception, attention, memory...) exist and that can be studied.
Perhaps we understand this better if we make a comparison between the cognitive and behavioural perspectives. The main difference lies in the assumptions about what is learned:

- According to the cognitive approach, knowledge and strategies are learned and changes in them make changes in behaviour possible.
- In the behavioural perspective what is learned are the new items of behaviour themselves.

To try to make it clearer: cognitivism considers learning as the extension and transformation of the understanding we already possess, and not as the simple recording of associations in the blank spaces of the brain.
Thus, under the framework of cognitivism it is understood that what we already know determines what we learn.

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Main perspectives on learning

CONSTRUCTIVISM

This approach directs the attention to two key aspects of learning: the social factor and the cultural factor. Although it has its roots in the cognitive perspective, constructivist theories have advanced further, giving rise to new teaching strategies and methods. Constructivism can be divided into two aspects:

- Psychological constructivism: the focus is on how individuals make sense of the world based on their own knowledge and beliefs
- Social constructivism: it considers that social interaction, cultural tools and activity shape individual learning. Learners appropriate the results achieved by working together.

Some congruent teaching methods with the constructivist perspective are:

- Inquiry-based learning
- Problem-based learning
- Cooperative learning
- Cognitive tutoring
- Service-learning

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Main perspectives on learning

SOCIAL COGNITIVE PERSPECTIVE

Social cognitive theory has its origins in the work that Albert Bandura initiated in 1950.

This current perspective:
• maintains an emphasis on the role of other people to serve as models and teachers (social part)
• but also includes thinking, beliefs, expectations, anticipation, self-regulation, comparisons and judgments (cognitive part)
Observational learning is a fundamental element of social cognitive theory.

What determines that a person learns modelled behaviours and skills?
1. The developmental level of the observer (the older the person, the greater the ability to focus attention and use memory strategies).
2. Status of the model (children tend to imitate people who appear competent, powerful, prestigious, and enthusiastic).
3. Model similarity (we imitate more easily those who we consider to be similar to us).

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Main perspectives on learning

SOCIAL COGNITIVE PERSPECTIVE

How does the observational learning occur?

It includes four elements:

- ATTENTION: when teaching a skill, it is necessary for students to see from the same perspective as the teacher, directing their attention to the specific characteristics of the situation.

- RETENTION: this involves representing at a mental level the acts of the model. Retention is improved by mental rehearsal (imagining doing it) and real practice.

- ENERATION: once we know how a behaviour is conducted and we remember the elements, we may still not perform it accurately: practice, feedback and training will make the behaviour more accurate.

- MOTIVATION AND REINFORCEMENT: we may acquire a new behaviour, but it is likely that we will not perform it unless there is an incentive to do so.

3 forms of reinforcement that promote observational learning:

1.Direct reinforcement: the observer reproduces the behaviour and receives the reinforcement (a gymnast successfully performs an exercise, and the coach says "Excellent!").

2.Vicarious reinforcement: the observer sees others receive reinforcement for a specific behaviour and then performs that same behaviour more frequently (if we congratulate a student for a clean and neat presentation, it is likely that those who witnessed it will try to take care of their presentation as well).

3.Self-reinforcement: students must learn to manage their lives, set their own goals and give themselves their own reinforcement, since in adult life rewards are ambiguous.

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