

these approaches have been used primarily in special education in which individualized educational plans are implemented.

For group instruction, student progress in learning is monitored at the class or school level. The data have been primarily used for accountability purposes. These include the determination of whether a particular educational program has produced the desirable effect, the evaluation of the quality of education at the class or school level; and to evaluate whether sufficient progress has been made toward a particular standard. The assessment required by the NCLB is a typical case of using the evaluation of student progress for accountability with standard-based assessment design. Adequate Yearly Progress (AYP) is one of the cornerstones of the NCLB, which refers to an annual measure of student participation and achievement of statewide assessments and other academic indicators. Most states have designed standardized tests that students have to take to measure whether schools have made their individual AYP. Through the metric of AYP, states, school districts, and schools are held accountable for student progress in learning.

There has been a fundamental tension between using student progress evaluation for instructional feedback and for accountability. To be useful for feedback, emphasis needs to be placed on the richness of information. As such, large amounts of fine-grained student progress data need to be collected on many aspects of learning. Some of these data would necessarily be unstandardized and may have low reliability. To be useful for accountability, student progress data need to be accurate, standardized, and comparable from student to student. Often, the aspects of learning being evaluated would be limited. Therefore, a standardized assessment designed for accountability is often not very useful for instructional feedback. The former tends to use gains in large-scale standardized test scores to express progress in learning; while the latter tends to rely on informal and often verbal feedback. However, recent advances in a particular psychometric analytic approach known as Cognitive diagnostic modeling (CDM) has made it possible, at least theoretically, to obtain both reliable standardized scores to evaluate progress for accountability and fine-grained detailed multidimensional data for instructional feedback simultaneously.

Cross-References

- ▶ [Assessment in Learning](#)
- ▶ [Effects of Testing on Learning](#)
- ▶ [Test-Enhanced Learning](#)

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Evaluation of Testimony

- ▶ [Children's Critical Assessment of the Reliability of Others](#)

Evaluative Conditioning

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Synonyms

[Affective conditioning](#); [Affective learning](#); [Associative transfer of valence](#); [Evaluative learning](#)

Definition

Evaluative conditioning is most often defined as an effect rather than as a mental or neural process. As an effect, evaluative conditioning is a change in the valence of a stimulus that is due to the prior pairings of that stimulus with another stimulus (De Houwer 2007). The first stimulus is most often referred to as the conditioned stimulus (CS). The second stimulus is called the unconditioned stimulus (US). Evaluative conditioning is a subset of Pavlovian conditioning. Whereas Pavlovian conditioning can refer to any type of change that results from the pairing of stimuli, evaluative conditioning by definition involves a change in liking. Evaluative conditioning differs

from other learned changes in liking (e.g., the mere exposure effect) in that the change in liking is due to the pairing of stimuli rather than other regularities in the environment (e.g., the repeated occurrence of a stimulus).

Theoretical Background

The term Evaluative Conditioning was first used by Levey and Martin (1975), but earlier demonstrations of the effect have been reported (see De Houwer et al. [2001], and Hofmann et al. [2010], for reviews of the literature). As the word “conditioning” suggests, evaluative conditioning research was initially closely tied to the learning literature, more specifically, the literature on Pavlovian conditioning. Because preferences are assumed to be an important determinant of many aspects of behavior and cognition, interest in how stimulus pairings can lead to changes in preferences soon spread to consumer psychology, clinical psychology, emotion research, and social psychology. Research on evaluative conditioning can help us understand how preferences are acquired during the lifetime of organisms.

Important Scientific Research and Open Questions

Given its origins in learning psychology, research on evaluative conditioning primarily dealt with the question of whether and how evaluative conditioning differs from other forms of Pavlovian conditioning (see De Houwer et al. [2001], and Hofmann et al. [2010], for reviews). Initial research suggested that there are differences. First, whereas Pavlovian conditioning relies heavily on awareness of the CS-US contingencies, some findings suggest that evaluative conditioning can occur without contingency awareness. Second, conditioned changes in liking seem to persist even when the CSs are presented on their own after conditioning. Hence, evaluative conditioning appears to be less sensitive to extinction than other forms of Pavlovian conditioning. Because of these differences, some authors suggested that evaluative conditioning depends on more basic learning processes than other forms of Pavlovian conditioning. Most prominently, evaluative conditioning has been attributed to a Hebbian-like learning mechanism in which the formation of associations in memory is driven primarily by co-occurrences.

More recent findings, however, question the idea that evaluative conditioning is a unique form of conditioning that relies on a unique type of association formation process. Many studies have been reported which show that evaluative conditioning does crucially depend on contingency awareness. A recent meta-analysis (Hofmann et al. 2010) confirms that contingency awareness is by far the most important moderator of the size of Evaluative Conditioning. The meta-analysis also revealed a significant extinction effect, be it a relatively small one. Other recent studies showed that evaluative conditioning is similar to other types of Pavlovian conditioning also in that it depends on attention and goals and can result from instructions rather than actual stimulus pairings (e.g., Pleyers et al. 2009). These findings suggest that evaluative conditioning depends on the same mental processes than other types of Pavlovian conditioning. Some have argued that both types of learning are mediated by formation of propositions, but because of the many conflicting findings, strong differences in opinion exist about the conditions that moderate evaluative conditioning and the mental processes that mediate it (see Hofmann et al. 2010). It is possible that the divergent results are due to the fact that evaluative conditioning can be produced by different kinds of mental processes (De Houwer 2007). Sometimes, evaluative conditioning might be due to simple associative mechanisms, in which case it would be independent of contingency awareness and attention. Other instances of evaluative conditioning might be due to propositional processes and thus be dependent on contingency awareness and attention. Although this dual-process hypothesis seems plausible, it raises important questions about how the processes interact and what variables determine when a particular process will drive Evaluative Conditioning.

Despite the uncertainty about the conditions under which evaluative conditioning occurs and the mental processes that mediate Evaluative Conditioning, there is general agreement about the fact that evaluative conditioning is a genuine phenomenon that contributes to many different aspects of behavior (see Walther et al. 2005, for a review). In consumer psychology, evaluative conditioning is seen as an important source of attitudes towards products and brands. In clinical psychology, it has been proposed that evaluative conditioning contributes to (the return of) fear.

In social psychology, evaluative conditioning has been linked with a variety of topics such as attitude formation, ingroup favoritism, prejudice, and stigmatization. Although there are boundary conditions to when evaluative conditioning occurs, the available literature shows that evaluative conditioning is a general phenomenon that has been observed with many different types of stimuli. In all likelihood, Evaluative Conditioning will thus remain an important topic in many areas of psychology.

Cross-References

- ▶ [Associative Learning](#)
- ▶ [Attitude Change \(Through Learning\)](#)
- ▶ [Attitudes – Formation and Change](#)
- ▶ [Conditioning](#)
- ▶ [Dual Process Learning Model](#)
- ▶ [Pavlovian Conditioning](#)
- ▶ [Taste Aversion Learning](#)

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Evaluative Learning

- ▶ [Evaluative Conditioning](#)

Evaluative Priming

- ▶ [Affective Priming and Learning](#)

Evaluative Response Signal

- ▶ [Feedback in Instructional Contexts](#)

Evaluative Response Strategies, Planned and Coordinated Sequence of Post-Response Information

- ▶ [Feedback Strategies](#)

Event Memory

- ▶ [Episodic-Like Memory in Food-Caching Birds](#)
- ▶ [Memory for “What,” “Where,” and “When” Information in Animals](#)

Everyday Consciousness

- ▶ [Learning Defense](#)

Everyday Learning

- ▶ [Comprehensive Learning](#)
- ▶ [Learning in Practice and by Experience](#)

Everyday Learning: Instruction and Technology Designs

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Synonyms

[Educational technology](#); [Instructional technology](#); [Web-based instruction](#)