

# Teaching someone something using classical conditioning

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The study of Educational Psychology pairs the science of psychology to educational practices and provides teachers with evidence-based knowledge to support their day-to-day decision making in the classroom (PowerPoint, Mullin). Therefore, it is no surprise that many educational psychologists focus their research and understanding on learning theories about how the human brain processes and stores new information. Learning incorporates 3 critical components; permanent, change, and experience. When written in a sentence together, learning is any relatively permanent change in an organism that results from experience (PowerPoint, Mullin).

One domain of learning theories named behavioral learning theories has 2 categories, classical conditioning and operant conditioning. Classical conditioning is widely used in modern psychology in the areas of neuroscience and cognitive science, and is the topic of this paper henceforward. Presentation - Ivan Pavlov, a Russian psychologist discovered classical conditioning. Pavlov was a physician who was studying gastric functioning in dogs by examining their saliva in various feeding conditions.

During some of his experiments, Pavlov observed that the dogs began to salivate before they were even given any food. Upon further investigation, Pavlov discovered that the dogs salivated in response to hearing a sound from the mechanism that delivered the food. Pavlov realized something unusual was occurring because he knew that dogs don't instinctively salivate in response to a sound (Classical Studies in Psychology, Swartz). After further investigation, Pavlov realized that the dogs "learned" that every time they heard that sound, they were about to be fed.

“ This ‘ pairing’ of a stimulus that naturally caused a biological response with another stimulus that did not reflexively cause a response is the essence of classical conditioning” (Classical Studies in Psychology, Swartz). It is vital that the pairing of the unconditioned stimulus and neural stimulus are close in proximity to one another and that the UCS always proceeds the neural stimulus. Using a behavioral theory named classical conditioning, one can “ condition” someone else to perform an involuntary behavior. The subject involuntarily performs the desired behavior of the teacher through the introduction of an unconditioned stimulus.

There are 4 other important terms in the process of acquiring new learning through classical conditioning; neutral stimulus, conditioned stimulus, conditioned response, and unconditioned response. First, the teacher must know of a stimulus that involuntarily causes the subject to perform a behavior. For example, bringing a hot dog close to a dog will make them salivate. The stimulus that is introduced in this example (hot dog) is called the unconditioned stimulus and the behavior that the dog is performing (salivation) is called the unconditioned response.

An unconditioned stimulus is a behavior or event that evokes an automatic response. An unconditioned response is the automatic behavior caused by the stimulus, which can be physiological or emotional (Ed Psych Modules, Bohlin). It is important to keep in mind that all throughout this process, no physiological changes cause the dog to salivate. The dog instinctively salivates due to the presence of the hot dog and cannot control his salivation. Next, the teacher chooses a neutral stimulus. This neutral

stimulus evokes no automatic response; it only catches the individual's attention.

Classical conditioning is based on the pairing of a neutral stimulus to an involuntary behavior. For example, if a bell is rung, the dog does not salivate. The bell is the neutral stimulus. Now that the unconditioned stimulus, unconditioned response, and neutral stimulus are all identified, it is time to pair the neutral stimulus and unconditioned stimulus. For example, if we pair the hot dog and the bell, the dog will still salivate. If we continue to do this repeatedly, we can condition the dog to associate a hot dog every with the noise of the bell.

Then, later, the unconditioned stimulus can be withdrawn and the neutral stimulus evolves to become the conditioned stimulus. Now the conditioned stimulus or learned stimulus evokes a conditioned response, or learned response. Given the example, the conditioned response is salivation. When it hears the bell, the dog salivates because the dog was conditioned to associate the hot dog with the sound of the bell. In another study conducted by John Watson, we learn other terms associated with classical conditioning.

Watson's well-known experiment is referred to as " Little Albert. " Albert was an 11-month-old baby. Watson showed Albert a small white mouse, which Albert liked. Then, while seeing the mouse, Watson presented a loud noise that scared Albert and made him cry. By pairing the loud noise that scared Albert with the mouse he liked, Watson was able to condition Albert to be afraid of the mouse. Every time Albert saw the mouse, he cried after acquiring the conditioned stimulus (white rat) and conditioned response (fear). Later, Albert showed signs of generalization.

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He started showing the same fear response to other things that were also white and fuzzy. Instead of only being afraid of rats, Albert became afraid of mice, white rabbits, and other similar things that resembled the white rat (Ed Psych Modules, Bohlin). On the contrary, Albert failed to discriminate between 2 stimuli. Instead he believed that the white rabbit would present the same loud noise the white rat did. If he were taught to discriminate between the two stimuli, then he would not fear the white rabbit, knowing the loud noise would not accompany it.

Lastly, if the conditioned stimulus is presented repeatedly without the unconditioned stimulus, the previously learned behavior will become extinct or disappear. This is called extinction. Given Little Albert's experiment, if Watson were to present the white rat enough times without the loud noise, Albert's fear of the rat would go away and his reaction to the animal would be the same as it was before the unconditioned stimulus was introduced (amicable). If the conditioned response is never paired again with the neutral stimulus then the conditioned response will fade and then disappear.

However, if in the future the unconditioned response is reintroduced to the neutral stimulus, the individual will experience spontaneous recovery. The individual will immediately behave the same way it did when it was first conditioned. For example, if after extinction the loud noise were presented with the white rat, Little Albert would be scared of the rat from that point on, unsure of whether the sound (UCS) will be presented with the rat (neutral stimulus). Application Section- Although the following example is unusual and meaningless, the experiment models all topics of classical conditioning.

We will teach a subject to 'fear' the word CAN and flinch whenever he/she hears it being read aloud. Classical conditioning is defined as a conditioned response to a neutral stimulus after having been paired repeatedly with an unconditioned stimulus. The response is involuntary, similar to a reflex reaction. Being sprayed in the face with water will cause a person to flinch. The spraying of the water (unconditioned stimulus) causes an automatic reaction of flinching (unconditioned response). Saying a word such as "CAN" (neutral stimulus) will not normally cause a person to flinch.

If, however, you say a string of random words but always squirt a person in the face immediately after saying the word "CAN," you can condition the person to flinch at the word "CAN" without squirting them in the face with water. However, the squirt in the face with water must be given immediately after they say the word "CAN" and be consistently administered. By pairing the squirting of the water with the word "CAN," the person learns to associate being squirted with hearing that particular word. Therefore, the reflex of flinching becomes "conditioned" to occur with the neutral stimulus.

The conditioned stimulus is the word CAN and the conditioned response is flinching. In this experiment, the teacher can model generalization by saying words that sound like can or are can written in all lowercase lettering. Although similar to the conditioned stimulus CAN, these other words are not the same. The learner generalizes if he or she flinches when hearing the word can, cannot, or can-talope. The teacher can also model extinction with this example. Extinction occurs when the conditioned stimulus is presented repeatedly without the unconditioned stimulus.

In this experiment, the learner would model extinction when the teacher reads the word CAN without spraying the learner with water and the learner shows no flinching or fear when he or she does say the word CAN. In this experiment, spontaneous recovery occurs when the teacher has been reading the list of words without administering the conditioned stimulus but spontaneously sprays the learner the next time he or she says the word CAN and the learner reacts with the same fear or flinch he or she had after acquisition of the conditioned stimulus.

Lastly, discrimination is modeled when the learner does not flinch (exhibit the conditioned response) when he or she hears a word that sounds like CAN, such as " call". The learner discriminates between the words he or she hears and only responds to the word CAN, the conditioned stimulus.

Conclusion- In all, this method of classical conditioning is very practical in an educational environment. Classical conditioning can affect student's emotional states regarding teachers, schools, and academic subjects.

For example, a student who has been punished at home for doing poorly on a test may begin to fear taking tests. This is because they associate success with the way their parents will treat them at home. This paralyzing fear is detrimental to a student and contributes to many anxiety disorders. Another example is a child who has been harassed or victimized on the playground by other students may fear recess as a whole (Ed Psych Modules, Bohlin).

Lastly, a student who relates to a teacher and enjoys their class may associate these feeling of happiness towards the curriculum being taught.

Therefore, if a student likes their math teacher, they are more likely to enjoy math, and consequently perform better in that class. There are also a few <https://assignbuster.com/teaching-someone-something-using-classical-conditioning/>

things teachers should note when utilizing classical conditioning; teachers should avoid conditioning negative response, teachers should pair learning to positive emotions; and teachers should be able to teach their students to generalize and discriminate appropriately.

Using the examples above, if a student who relates well to his math teacher discriminates and believes he can only do well when being taught by this one professor, he will not perform to his fullest capacity in other subjects. Through this application, we learn that applying classical conditioning in an educational setting is an effective way to “teach someone something”.