

# [Simple and complex learning](https://assignbuster.com/simple-complex-learning/)

Classical ConditioningCreated by Ivan Pavlov. Classical conditioning is a learning process that occurs through associations between an environmental stimulus and a naturally occurring stimulus. In Pavlov's classic experiment with dogs, the neutral signal was the sound of a tone and the naturally occurring reflex was salivating in response to food. By associating the neutral stimulus with the environmental stimulus (the presentation of food), the sound of the tone alone could produce the salivation response. Unconditioned StimulusThe unconditioned stimulus is one that unconditionally, naturally, and automatically triggers a response. For example, when you smell one of your favorite foods, you may immediately feel very hungry. In this example, the smell of the food is the unconditioned stimulus. ONSIMPLE & COMPLEX LEARNING SPECIFICALLY FOR YOUFOR ONLY$13. 90/PAGEOrder NowUnconditioned ResponseThe unconditioned response is the unlearned response that occurs naturally in response to the unconditioned stimulus. In our example, the feeling of hunger in response to the smell of food is the unconditioned responseConditioned StimulusThe conditioned stimulus is previously neutral stimulus that, after becoming associated with the unconditioned stimulus, eventually comes to trigger a conditioned response. In our earlier example, suppose that when you smelled your favorite food, you also heard the sound of a whistle. While the whistle is unrelated to the smell of the food, if the sound of the whistle was paired multiple times with the smell, the sound would eventually trigger the conditioned response. In this case, the sound of the whistle is the conditioned stimulus. Conditioned ResponseThe conditioned response is the learned response to the previously neutral stimulus. In our example, the conditioned response would be feeling hungry when you heard the sound of the whistle. Little Albert ExperimentNeutral Stimulus: White Rat
Unconditioned Stimulus: The loud noise
Unconditioned Response: Fear
Conditioned Stimulus: The white rat
Conditioned Response: FearLittle Storm ExampleNeutral: Lightning
Unconditioned Stimulus : Mom's Behavior
Unconditioned Response: Fear, Crying
Conditioned Stimulus: Lightning
Conditioned Response 3: Fear, CryingGSR (Galvanic Skin Response) ShockNeutral Stimulus:
Unconditioned Stimulus: Shock
Unconditioned Response: GSR Change
Conditioned Stimulus: 1000 Hz
Conditioned Response: GSR ChangeAcquisition CurveAcquisition (Trials UCS-CS), Extinction (CS), and Spontaneous Recovery (CS). Spontaneous RecoveryThe temporary return of an extinguished response after a delay. ExtinctionTo extinguish a classically conditioned stimulus and repeatedly present the (CS) without the unconditioned stimulus (UCS). Stimulus GeneralizationExtension of a conditioned response from the training stimuli to a similar stimuli. Such as Little Albert being afraid of all the animals after the CS. Stimulus DiscriminationResponding differently because the two stimuli predict different outcomes. Ex. Responding one way to a class bell and differently to a fire alarm bell. Operant ConditioningFather of: B. F. Skinner. Responses are based on reinforcement. He tested this on pigeons and thus established a schedules of reinforcement. ReinforcementAnything that makes a response more likely to occur. ShapingThe process of reinforcing successive approximations to the desired response. Fixed Ratio(e. g. 1: 1, 5: 1, 10: 1)- It is known as the number of responses required prior to responses. Reinforcement is provided after a certain number of correct responses. Steady response, but short delays between each reinforcement. Fixed IntervalAn amount of time that has to pass after a response prior to the next response being reinforced. Ex. 15 seconds (pause), 15 seconds (pause), etc. Variable RatioThe number of responses required prior to a reinforcement varies, so reinforcement is given after 2 or 3 responses, but they still generate a steady rate response. Variable IntervalsTime between previous reinforcement and the next response being reinforced varies. Basically reinforcement is available after a variable amount of time. Ex. 2 minutes, then 7 seconds, then 3 minutes and 40 seconds. Avoidance LearningIt resembles both classical and operant conditioning. Highly resistant to extinction. Maintains phobias. Ex. Rat is placed in a grid. A light is then shown, which then releases and electrical impulse on the rat's side of the grid. To avoid the shock the rat climbs over the fence. Probability LearningIs a research paradigm used in the study of learning. In these studies subjects are asked to guess which of a limited choice of stimuli or events will occur next. With experience their predictions will approximate the actual probability of the possible outcomes. Concept FormationThe way we learn meaning of concepts and words by identifying relevant dimensions and the levels of those dimensions associated with the concept. Serial LearningThe learner is exposed to stimuli to be remembered and later recalls those stimuli in the same order in which they initially appeared. Paired Associates LearningPaired-associate (PA) learning was invented by Mary Whiton Calkins in 1894 and involves the pairing of two items (usually words)-a stimulus and a response. For example, words such as calendar (stimulus) and shoe (response) may be paired, and when the learner is prompted with the stimulus, he responds with the appropriate word (shoe). Problems with explaining all learning from classical and operant conditioning, Garcia's work on taste aversions. Chomsky's universal grammar. Face Recognition (prosopagnosia). Difficulty with logic problems , but ease of cheater detection.