

Unit 4: Learning

Some psychologists focus their study on how humans and other animals learn and how some experiences can lead to changes in behavior and mental processes. Because the process of learning requires both physiological and psychological processes to work together, the two preceding units provide the foundation for this unit. Many psychologists who study learning focus on observable behaviors and how those behaviors can be changed or reinforced. Other learning psychologists study how the individual's observations of other peoples' behaviors influence changes in that individual's mental processes and resulting behaviors.

Learning Targets (Mark the box when you pass the Retrieval Practice Quiz on Schoology):

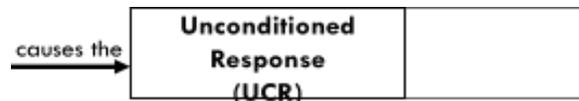
- 4.A Identify the contributions of key researchers in the psychology of learning (e.g., Albert Bandura, Ivan Pavlov, Robert Rescorla, B.F. Skinner, Edward Thorndike, Edward Tolman, John B. Watson, John Garcia.)
- 4.B Interpret graphs that exhibit the results of learning experiments.
- 4.C Describe the essential characteristics of insight learning, latent learning, and social learning.
- 4.D Apply learning principles to explain emotional learning, taste aversion, superstitious behavior, and learned helplessness.
- 4.E Provide examples of how biological constraints create learning predispositions.
- 4.F Describe basic classical conditioning phenomena (e.g., acquisition, extinction, spontaneous recovery, generalization, stimulus discrimination, higher-order learning, unconditioned stimulus, unconditioned response, neutral/conditioned stimulus, conditioned response).
- 4.G Distinguish general differences between principles of classical conditioning, operant conditioning, and observational learning (e.g., contingencies).
- 4.H Predict the effects of operant conditioning (e.g., positive reinforcement, negative reinforcement, positive punishment, negative punishment).
- 4.I Predict how practice, schedules of reinforcement, other aspects of reinforcement, and motivation will influence quality of learning.
- 4.J Suggest how behavior modification, biofeedback, coping strategies, and self-control can be used to address behavioral problems.

Classical Conditioning

How do our experiences influence our behaviors and mental processes?

Classical Conditioning:	
<i>How was the in-class demo with lemonade powder an example of classical conditioning?</i>	
Elements of Classical Conditioning	
Unconditioned Stimulus:	
Unconditioned Response:	
Neutral Stimulus:	
Conditioned Stimulus:	
Conditioned Response:	
<i>Why are the neutral stimulus and the conditioned stimulus ALWAYS the same?</i>	

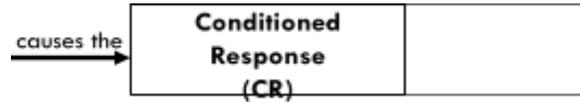
Unconditioned Stimulus (UCS)	
Neutral Stimulus (NS) gets paired with the UCS to become the	
Conditioned Stimulus (CS)	



Apply the elements of classical conditioning to our in-class demo with the lemonade powder:

Step 1.

Step 2.



Procedures	
Acquisition:	
<i>When should the NS be presented in respect to the UCS for acquisition to be most effective?</i>	
<i>How would one test to see if acquisition has occurred?</i>	
<i>When did acquisition take place with our lemonade powder demo?</i>	
Extinction:	
<i>What is the procedure for extinguishing a conditioned response?</i>	
<i>How would we extinguish the CR from the lemonade powder?</i>	
Spontaneous Recovery:	
<i>How would spontaneous recovery be demonstrated from our demo?</i>	

Generalization:	
What would be an example of generalization in reference to our lemonade powder demo?	
Discrimination:	
What would be an example of discrimination in reference to our lemonade powder demo?	
Famous Experiments in Classical Conditioning	
Explain Ivan Pavlov's contribution to psychology and learning.	
Explain John B. Watson's contribution to psychology and learning.	
How does John B. Watson's work with "Little Albert" go against what he would have believed psychology is?	
Modern Day Applications	
How is classical conditioning used in advertising?	
How does classical conditioning cause taste aversion?	
How can classically conditioning an aversive reaction be used to benefit others?	

Operant Conditioning Part I- Training Techniques

Law of Effect	
<p style="text-align: center;"><i>Identify and explain Edward Thorndike's contribution to psychology and learning.</i></p>	
Operant Conditioning	
<p>Operant conditioning:</p>	
<p style="text-align: center;"><i>Identify and explain B.F. Skinner's contributions to psychology and learning.</i></p>	
<p>Shaping:</p>	

Differentiate between classical and operant conditioning:

Characteristics	Classical	Operant
Types of association		
Focus of attention		
Types of response	Involuntary or reflexive	Voluntary
Bodily response	Internal; emotional, glandular	External; muscular, skeletal, verbal
Responses learned		

Training Techniques

Reinforcement:

What is the goal of reinforcement?

Punishment:

What is the goal of punishment?

This might seem easy, but it's gonna be tricky...

When determining the aspects of which training technique is being used, what questions should you ask?

Positive vs. Negative

Punishment vs. Reinforcement

Consequences

**Training Techniques
of
Operant Conditioning**

Stimulus

Aspects of Reinforcers

Levels

Primary

Secondary

Timing

Immediate

Delayed

How is delayed reinforcement connected to success?

Premack principle:

What would be an example of the Premack principle?

Further Comparisons to Classical Conditioning

How do terms from classical conditioning also apply to operant conditioning?

Operant Conditioning Part II- Schedules of Reinforcement

Schedules of Reinforcement

Continuous reinforcement:

Intermittent reinforcement:

Intermittent Reinforcement

When determining the aspects of which schedule of reinforcement is being used, what questions should you ask?

Fixed vs. Variable

Interval vs. Ratio

Fixed Ratio:

What are some examples of a fixed ratio schedule?

Variable Ratio:

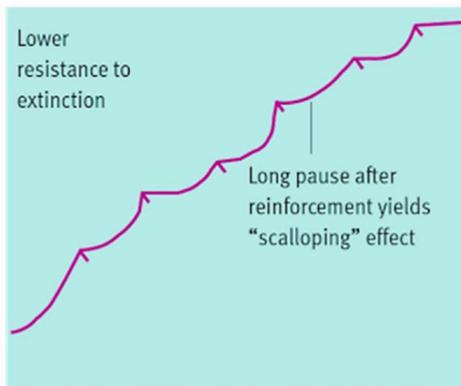
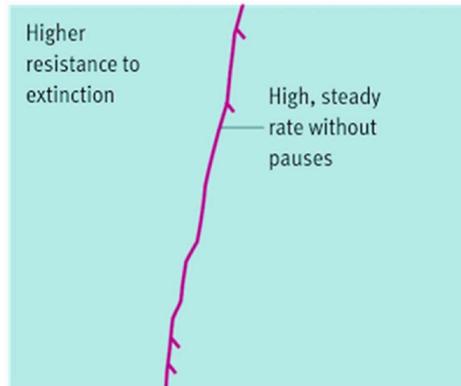
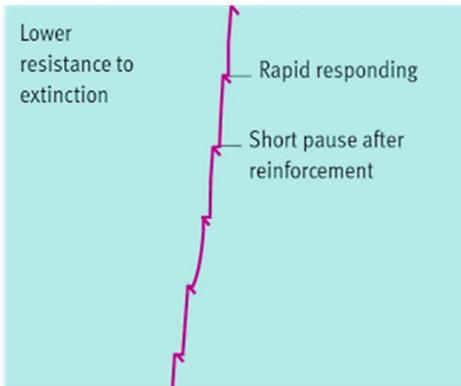
What are some examples of a variable ratio schedule?

Fixed Interval:

What are some examples of a fixed interval schedule?

Variable Interval:	
What are some examples of a variable interval schedule?	
Critical Thinking	
On your own, see if you can answer the following:	
Which schedule of reinforcement is best for getting an organism to learn a behavior?	
Which intermittent schedule of reinforcement is best if you want to ensure a behavior continues?	

Label the following graphs as to which schedule of reinforcement is being demonstrated:



Applications of Operant Conditioning

Token Economy:

Biofeedback:

What are some applications of operant conditioning?

Observational Learning

Observational Learning:	
Modeling:	
Vicarious Learning:	
The Bobo Doll Experiment	
<p><i>Explain Albert Bandura's contribution to psychology and learning:</i></p>	
Mirror Neurons:	
<p><i>What experiment discovered mirror neurons?</i></p>	
<p><i>What do mirror neurons help us explain about behavior?</i></p>	
Applications of Observational Learning	
<p><i>What applications does observational learning have in society?</i></p>	

Biology, Cognition, and Learning

Biological Influences & Predispositions

Taste Aversion:

Explain John Garcia's contribution to psychology and learning:

Instinctive Drift:

Explain the concept of instinctive drift:

Cognitive Influences

Learned Helplessness:

How does this relate to the cognitive process?

As unethical as the learned helplessness experiment is, what implications does it have within society?

Expectancy/Predictability:	
<i>Explain Robert Rescorla's contribution to psychology and learning:</i>	
<i>Simply said, what does expectancy or reliability mean in learning?</i>	
Cognitive Map:	
Latent Learning:	

<p><i>Explain Edward Tolman's contributions to psychology and learning:</i></p>	
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Observational Learning	
<p><i>How does observational learning relate to the cognitive process?</i></p>	
Learning & Personal Control	

What are some applications of personal control to learning?