Unit 4: Learning

Topic 4.1 – Introduction to Learning

1. What is association? This is when an individual connects items or experiences together because of the order in which they were experienced
2. What is the difference between observational learning and latent learning? Observational learning is when an individual learns by watching others. While latent learning is when an individual is exposed to information but you do not show your learning until later
2. Why would someone experience learned helplessness? This occurs when an individual feels that things are out of their control and that no matter what the individual does they will not be able to succeed
3. Define latent learning. This is when an individual is exposed to information but they do not show the learning until later when there is a need to show it
4.. Explain what social learning is. Learning happens by interacting with others
5. What is the difference between insight learning and trial-and-error learning? Insight learning is when there is a problem that needs to be solved and an individual will mentally work through the details to arrive at a solution. While trial-and-error is when an individual tries different solutions at random until one is successful
6. Describe superstitious behavior. This is when an individual learns through accidental reinforcement. This happens when an individual links something with a positive effect even when they are not related
7. Complete the table below.

Individual	Contribution
John Garcia	Researched association with the hypothesis that some associations are more readily made available than others. He is most known for his research into taste aversion
Albert Bandura	Coined the term observational learning. He also created the famous bobo doll experiment, which look at violence, aggression, and modeling
Edward Tolman	Looked at latent learning. He had rats complete mazes and discovered that rats who had previously been exposed to a certain maze did better than rats who had not been exposed to the maze
Edward Thorndike	Proposed trial-and-error learning. Here individuals try various solutions at random until one is successful
Ivon Pavlov	Father of classical conditioning. Most known for his experiments with dogs and saliva
B.F. Skinner	One of the first people to describe operant conditioning. Believed behavior becomes more likely to occur when reinforced
Robert Rescorla	Focused on cognition and learning. Showed how animals can be taught to expect the outcome of an event
John B Watson	Looked at how learning influences behavior and was one of the first people to state that behaviors are the result of learning

Topic 4.2- Classical Conditioning

1. Briefly describe Pavlov's experiment with dogs. Pavlov wanted to see if a dog would associate food with other stimuli. To do this he would place food down for the dog and ring a bell, eventually Pavlov would take the food away and just have the dog hear the bell. The result was the dog would salivate at the sound of the bell, anticipating that food would come

Topic 4.2- Classical Conditioning (Continued)

2. Explain the difference between an unconditioned stimulus and unconditioned response. UCS is a stimulus that naturally triggers a response, there is no teaching and learning. A UCR is a response that does not need to be learned and occurs naturally
3. Identify the UCS and UCR in Pavlov's experiment. UCS is the food and the UCR is the dog drooling
4. What is a neutral stimuli? A stimulus that elicits no response from a subject
5. Describe acquisition and identify how it was used in Pavlov's experiment. The process of associating a NS with a UCS. Pavlov associated a bell (NS) with dog food (UCS)
6. Explain the difference between a conditioned stimulus and conditioned response. A CS is when a NS is paired with an UCS to trigger a CR. A CR is when a previously UCR is occurring due to a CS
7. Why would extinction occur? This occurs when the UCS is not paired with the CS anymore
8. Describe spontaneous recovery. This is when there is a reappearance of a conditioned response after a pause of an extinguished CR
9. What is the difference between stimulus discrimnation and stimulus generalization? Stimulus discrimnation is when a subject has been conditioned and is able to recognize when other stimuli are different than the CS. Stimulus generalization is when a subject has been conditioned and responds to other stimuli that are similar to the original CS
10. Explain higher-order conditioning. This is when a NS becomes the new CS, without the UCS being present
11. Provide an example of higher-order conditioning. You could take Pavlov's original CS and CR and associate the CS with a new NS. For example you could turn a light on before ringing the bell, this would get the dog to start salivating once the light was turned on

Topic 4.3- Operant Conditioning

1. According to B.F. Skinner: how do punishments and reinforcements impact learned behavior? Individuals will be more likely to do certain behaviors when they receive reinforcements and will be less likely when punished
2. Who did B.F. Skinner base has work off of? Edward L. Thorndike
3. Describe the law of effect. When behaviors are followed by favorable consequences they become more likely to occur, and when behaviors are followed by unfavorable consequences they are less likely to occur
4. Identify a positive and negative consequence. Answers will vary. Example: 1) Positive: You work hard at work and get a raise 2) Negative: You show up late for work and get fired
5. How is Operant Conditioning different from Classical Conditioning? Operant conditioning involves making an active decision, while classical conditioning involves a response to a stimulus
6. Describe how Skinner used shaping in his Skinner box experiment. Skinner put a rat in a box that had a food dispenser, speaker, light, and a lever. He started by giving the rat a food pellet when the rat moved towards the lever. Eventually he only gave the rat a pellet once the rat pushed the lever
7. In Skinner's experiment what is the lever? A discriminative stimulus (a stimulus elicits a response)
8. Complete the table below.

	Description	Example
Positive Reinforcement	When a desirable stimulus is added, which has the result of promoting/increasing a behavior	You get an A in your class and your parents give you 50 dollars, which motivates you to keep studying
Negative Reinforcement	When a undesirable stimulus is removed, which has the result of promoting/increasing a behavior	You get an A in your class and your parents take away your chores, which motivates you to keep working hard
Positive Punishment	When a unpleasant stimulus is added and the result is a decrease in an undesirable behavior	You get a bad grade and you have to pay your parents money, which motivates you to try harder in school
Negative Punishment	When a positive stimulus is removed and the result is a decrease of an undesirable behavior	You get a bad grade in school and get your phone taken away, motivating you to work harder in school

Topic 4.3- Operant Conditioning (Continued)

9.Complete the table below.

	Increase Behavior	Decrease Behavior
Add Stimulus	Positive Reinforcement	Positive Punishment
Take away Stimulus	Negative Reinforcement	Negative Punishment

10.Complete the table below.

Reinforcement Schedule	Description	Impact	Example
Fixed-ratio schedule	Reinforcement is given after a set amount of responses	Great at getting a high number of responses in a short amount of time	Punch card at a restaurant gives you a free meal after 5 visits
Fixed-interval schedule	Reinforcement is given after a set amount of time	Will often see more responses occur right before the payout	Employe of the month award is given the last week of each month
Variable-ratio schedule	Reinforcement is given at what appears to be a random amount of responses	Will see a high amount of responses from an individual	Slot machines at a casino
Variable-interval schedule	Reinforcement is given after a random amount of time	Responses are consistent over a period of time	Secret shoppers at a store

11. Why does the overjustification effect happen? This is when extrinsic rewards replace intrinsic motivation. If the extrinsic rewards stop, the behavior will most likely stop. This is because an individual did not have intrinsic motivation and was only doing the action because of extrinsic rewards

12. What is the difference between extrinsic motivation and intrinsic motivation? Extrinsic motivation is when an individual is motivated to perform a behavior because of an external reward or to avoid an external punishment. Intrinsic motivation is when an individual has a desire to do something for their own sake, there is no external punishment or reward

Topic 4.4- Social and Cognitive Factors in Learning

1. Complete the table below

Influence on learning	Example
Biological	Genetic predisposition, adaptive responses, or neural mirroring
Psychological	Previous experiences, generalizations, expectations, or associations
Social-cultural	Culture, motivations, family, friends, or peer groups

2. Define preparedness. A biological predisposition to learn associations between things that help with survival

3. What is instinctive drift? Animals that learn behaviors by reinforcement will revert back to certain biological patterns that they are predisposed to

4.What did Robert Rescorla and Allan Wagner discover with their experiment on rats? They found that animals can be taught to expect the outcome of an event, showing the importance of cognition in learning

5. Edward Chase Tolman's rat study had rats complete mazes. What did researchers notice when observing the rats? Rats started to develop a mental map of the environment, known as a cognitive map. This allowed the rats to complete the maze faster over time

Topic 4.4- Social and Cognitive Factors in Learning (Continued)

6. Define latent learning. Learning that happens but is not noticeable until there is a reason to demonstrate it
7. Compare social learning and observational learning. Social learning is when an individual learns from watching others, interacting with other people, or mimicking other people. Observational learning is when a person learns information or skills from watching others receive different reinforcements or punishments and will expect a similar outcome to occur if they do the same action
8. What is the difference between external locus of control and internal locus of control? External locus of control are different outside factors that impact a person and could determine their fate or outcome. (Things outside of their control) Internal locus of control is how a person impacts their own fate (Things inside of their control)
9. What happens if a person has a high degree of external locus of control and little internal locus of control? They may become frustrated and give up or feel like they can not do the action
10. Describe problem-focused coping and emotion-focused coping. Problem-focused coping is when individuals try to eliminate or reduce stress by directly changing the stressor or changing how they interact with the stressor. Emotion-focused coping is when an individual tries to eliminate or reduce stress by ignoring or avoiding the stressor, and focuses on their own emotional needs instead