

Learning

- A change in behavior as a result of experience or practice.
- The acquisition of knowledge.
- Knowledge gained through study.
- The process of gaining knowledge.
- A process by which behavior is changed, shaped or controlled.

What is Learning?

- Learning is a process
- Learning is a product

Process of Learning

- Learning involves the individual
 - Brain
 - Body
- Learning involves others
 - Groups
 - Organizations
 - Communities
 - Society
- Learning takes place somewhere
 - In physical environment
 - With things and tools
- Learning occurs over time

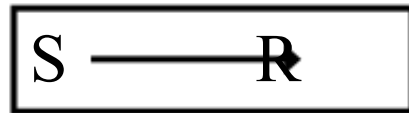
Products of Learning

- Learning is about ideas and concepts.
- Learning is about behaviors and skills.
- Learning is about attitudes and values.

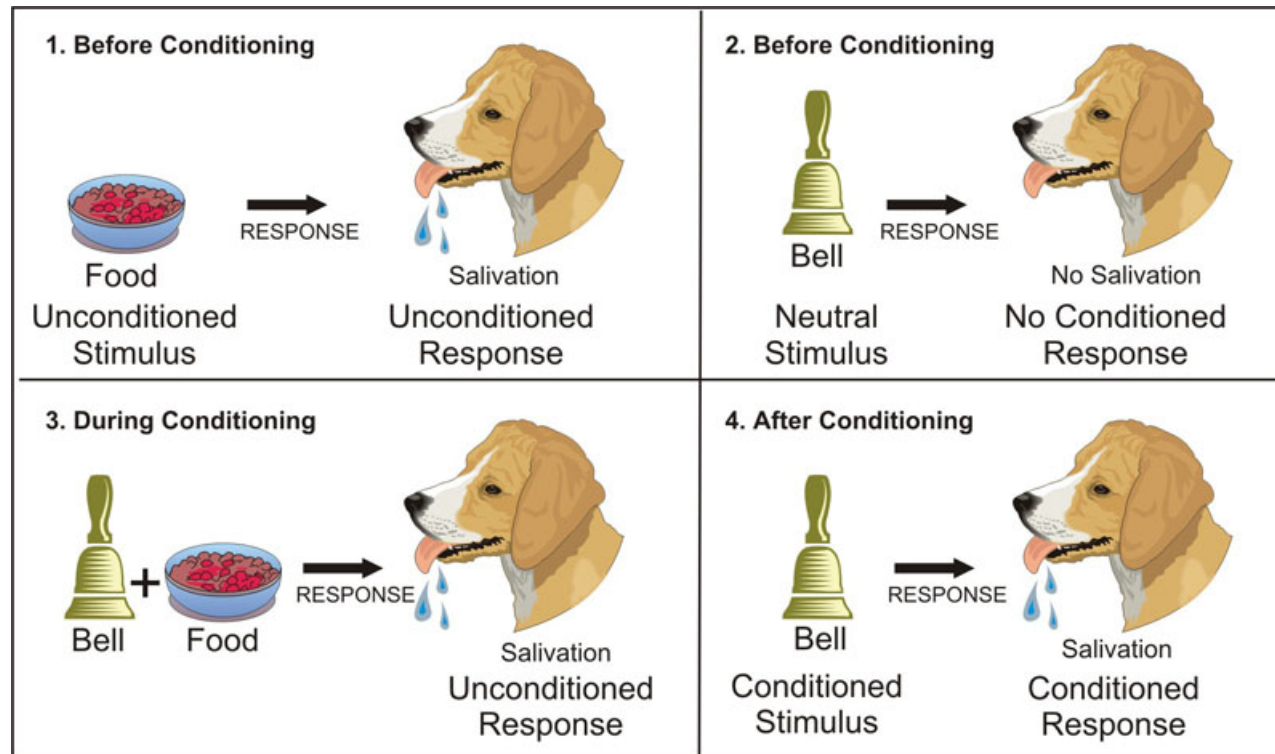
Theories of Learning

- Classical Conditioning - Pavlov

A stimulus is presented
in order to get a response:



Classical Conditioning – Pavlov



Classical Conditioning

- Includes stimuli and responses
 - **Unconditioned Stimulus (US)** – automatically produces a response
 - **Unconditioned Response (UR)** – naturally occurring response
 - **Conditioned Stimulus (CS)** – an object used to stimulate a response
 - **Conditioned Response (CR)** – learned response

Operant Conditioning

- Operant Conditioning – Skinner
- Argues that behavior is a function of its consequences.
- The behavior which is followed by pleasant consequences is likely to be repeated, and behavior followed by unpleasant consequences is less likely to be repeated.
- Also called Instrumental Learning.

Operant Conditioning

by B.F. Skinner

	Punishment (decreasing behavior)	Reinforcement (increasing behavior)
Positive (adding)	adding something to decrease behavior	adding something to increase behavior
Negative (subtracting)	subtracting something to decrease behavior	subtracting something to increase behavior

- Positive Reinforcement: If you give your **child a treat** (reinforcer) after she sits quietly at the table (the desired response), she is likely to sit quietly at the table **again next time**.
- Negative reinforcement: also helps to strengthen a response or behaviour. It is **removal or escaping an unpleasant** outcome. Example: wearing a sweater to avoid catching cold. In negative reinforcement a person tries to avoid a negative outcome.

- Positive punishment: teachers may assign extra school works to students who misbehave.
- Negative punishment: something good is being taken away as a result of the individual's undesirable behavior.

Eg: Losing access to a internet

Social Learning

- Social learning theory - Bandura
- People learn through observation and direct experience.
- Extension to operant conditioning.

Learning Theory:

Bandura's 4 Principles Of Social Learning

1. Attention

We cannot learn if we are not focused on the task. If we see something as being novel or different in some way, we are more likely to make it the focus of their attention. Social contexts help to reinforce these perceptions.

2. Retention

We learn by internalising information in our memories. We recall that information later when we are required to respond to a situation that is similar the situation within which we first learnt the information.

3. Reproduction

We reproduce previously learnt information (behaviour, skills, knowledge) when required. However, practice through mental and physical rehearsal often improves our responses.

4. Motivation

We need to be motivated to do anything. Often that motivation originates from our observation of someone else being rewarded or punished for something they have done or said. This usually motivates us later to do, or avoid doing, the same thing.

Summary by Steve Wheeler

Behaviour modification

- Behaviour modification is a treatment approach, based on the principles of operant conditioning, that replaces undesirable behaviours with more desirable ones through positive or negative reinforcement .
- The various techniques of behaviour modification are:
 - Positive reinforcement
 - Negative reinforcement
 - Punishment
 - Extinction

- Positive Reinforcement: Providing a reward for desired behaviour (Gifts on good performance)
- Negative Reinforcement: Removing an unpleasant consequence when desired behaviour occurs (Start early on Monday morning to avoid being late for work)
- Punishment: Applying an undesirable condition to eliminate an undesirable behaviour.

- Extinction: **Withholding reinforcement** of a behaviour to stop its occurrence (Not to give attention/Ignore)
- **Schedules of Reinforcement**
 - Continuous Reinforcement Schedules
 - Partial/Intermittent Reinforcement Schedules

- In continuous reinforcement, the desired behaviour is reinforced *every single time* it occurs. This schedule is best used during the initial stages of learning in order to create a strong association between the behaviour and the response.
- Once the response is firmly established, reinforcement is usually switched to a partial reinforcement schedule.

- There are four schedules of partial reinforcement:
 - i) *Fixed-ratio schedules* are those where a response is reinforced only after a specified number of responses. Ex: Providing food to a rat after it presses a bar five times.
 - ii) *Variable-ratio schedules* occur when a response is reinforced after an unpredictable number of responses. Ex: Gambling and lottery games

- iii) *Fixed-interval schedules* are those where the first response is rewarded only after a specified amount of time has elapsed. Ex: Annual Appraisal
- iv) *Variable-interval schedules* occur when a response is rewarded after an unpredictable amount of time has passed. Ex: Audits

Activity: Think, Pair and Share

- What do you plan to do immediately after you graduate from college?