Topic 4
LEARNING THEORY, MOTIVATION & HUMAN ACHIEVEMENT
FEM4101
LEARNING OUTCOMES

1. Able to explain learning theories.
2. Able to explain the application of learning theory in motivation and human achievement.
LEARNING THEORY

- Learning is one of the most important activities in which humans engage.
- Learning can be defined as the **process leading to** relatively permanent behavioural change or potential behavioural change.
- In other words, as we learn, we alter the way we perceive our environment, the way we interpret the incoming stimuli, and therefore the way we interact, or behave.
- Theories about human learning can be grouped into four broad "perspectives". These are:

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<td>• focus on observable behaviour.</td>
<td>• learning as purely a mental/neurological process.</td>
<td>• emotions and affect play a role in learning.</td>
<td>• humans learn best in group activities.</td>
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The key assumptions of behaviourism are:

1. **The environment influences behaviour.**
   - Behaviourists believe that people's behaviours are a result of their interaction with the environment. Specifically, people become conditioned, or moulded, to respond in certain ways based on responses like feedback, praise and rewards.

2. **Learning is described through stimuli and responses.**
   - Behaviourists focus on observable events rather than events that occur inside a person's head, such as thoughts, feelings and beliefs.

3. **Learning must involve a behavioural change.**
   - Theorists believe that learning has not occurred unless there is an observable change in behaviour.

4. **Learning must result when stimulus and response occur close together in time.**
   - Learners must associate their response with a stimulus. In order for that to occur, the two must happen in conjunction with each other, or, in other words, be contiguous.

5. **Animals and humans learn in similar ways.**
   - Behaviourists, unlike many other theorists, performed their experiments using animals because they believed the study of animals could explain human learning behaviour.
Influenced by Pavlov’s Classical Conditioning.

Watson argued that such conditioning is the basis of human behaviour - if you stand up every time a lady enters the room, you're acting not out of “politeness,” but because behaviour is a chain of well-set reflexes.

Stimulus establish reflexes and respondent’s behaviours.
Hull is considered a neo-behaviourist thinker, but like the other major behaviourists he believed that human behaviour could be explained by conditioning and reinforcement.

Energy for behaviour is the result of drives. (Behaviour = Drives x Habits).

This theory states that organism, especially humans, learn to perform behaviour that have the effect of reducing their biological drives.

Drive presents a stimulus in form of a biological need like hunger, thirst, cold or sexual interest.

It is a state of need, when a living organism feels the needs to behave in certain way to reduce the need and restore the optimal biological state (homeostatic).

The reduction of the drive acts as a reinforcement for that behaviour. This reinforcement increases the likelihood that the same behaviour will occur again in the future when then same need arises.
Organisms suffer deprivation

1. Deprivation creates needs
2. Needs activate drives
3. Drives activate behavior
4. Behavior is goal directed
5. Achieving the goal has survival value
6. CONTINUE
Suggests that drive reduction may be a sufficient condition for reinforcement but not that drive reduction is the only or necessary condition.

Olds (1955) used electrical stimulation of the brain's pleasure centres as a form of positive reinforcement, and showed that animals would alter their behaviour to receive the stimulation.

In other words, does not account for how secondary reinforcers reduce drives.

Another major criticism of the drive reduction theory of learning is that it does not explain why people engage in behaviours that do not reduce drives.
For Skinner, motivation must be defined in behavioural terms, not as some internal drive or desire.

Skinner does not deal with intrinsic motivation. He simply focuses on observable behaviour and what increases it - If you want behaviour to increase, make sure it is reinforced.

Skinner focuses totally on what happens to an individual when he takes some action.

- Reinforcement Theory proposes that social behaviour is governed by events outside the human psyche.

- The basic premise is that people will more likely perform a specific behaviour if it is followed directly by something pleasurable or by the removal of something painful.

- Logically, it includes the opposite premise that people will less likely perform a specific behaviour if it is followed by something non-pleasurable (punishment or the removal of pleasure).

- Learning is the function of change in noticeable behaviour brought about by these positive or negative reinforcements – behaviour modification.

- Any external events that lead to an alteration or change in behaviour in this way are referred to as stimuli.

- The change in behaviour induced by a stimulus is a response.
SKINNER OPERANT CONDITIONING

“Desired Positive”
- Give Pleasure
- Remove Pain

“Undesired Negative”
- Give Pain
- Remove Pleasure

“Maintain Positive”
- Fade Reinforcers

21 Days

Behavior

“The Science of Changing Behavior”

“The closer you implement a Reinforcer to a Behavior, the greater the chance of changing behavior”
Bandura’s Social Learning Theory posits that people learn from one another, via observation, imitation, and modelling.

The theory has often been called a bridge between behaviourist and cognitive learning theories because it encompasses attention, memory, and motivation.

In the model, the interaction between the person and behaviour involves the influences of a person’s thoughts and actions.

The interaction between the person and the environment involves human beliefs and cognitive competencies that are developed and modified by social influences and structures within the environment.

The third interaction, between the environment and behaviour, involves a person’s behaviour determining the aspects of their environment and in turn their behaviour is modified by that environment.
Four important factors in social learning (observational learning)

**Attention**
Paying attention to the model is a condition for learning

**Retention**
Remembering what the model did is a condition for imitating the model’s behaviour

**Reproduction**
People must have the capacity (e.g. skills) for imitating the behaviour

**Motivation**
People must be motivated to imitate behaviour (e.g. importance of model or reward)
Social Learning Theory

- **Vicarious Learning**: or observational learning, occurs when a person is motivated to learn by watching someone else work and be rewarded.
  - People are motivated to imitate models who are highly competent, expert and receive attractive reinforcers.

- **Self-reinforcers**: desired outcomes a person can give themselves.
  - Person can reward themselves for success.

- **Self-efficacy**: refers to a person’s belief about their ability to perform a behavior successfully.
  - People will only be motivated if they think they have the ability to accomplish the task.
Several factors can influence the motivation of students. One important factor is the student's **self-efficacy**.

Bandura has repeatedly shown that when students have high self-efficacy for a certain learning task, they will put forth more effort to accomplish this task. They will work harder and persist longer with this learning task. As a result they are more likely to be successful than students with lower self-efficacy. **Self-efficacy has a motivating effect on students.**

Bandura recognizes that our motivation is effected by others through **vicarious experiences**. If we observe someone put forth effort to accomplish something, achieve it and be rewarded as a result, then this act of observation motivates us to engage in that practice.

This is the basis for most advertising. Companies motivate us to buy their products or services by showing someone use their product or service and the satisfying result that follows.

The model selects a certain type of toothpaste or clothing and then he or she becomes more interesting to others.
WHAT IS A REWARD?

- A reward is something given in **exchange for something** such as money, trophy, medal or any things wonderful.
- A **process that reinforces** behaviour to increase in intensity.
- The functions of rewards are based **directly on the modification of behaviour** and less directly on the physical.
WHAT IS AN INCENTIVE?

- Incentive is any **factor** (financial or non-financial) that **provides a motive** for a particular course of action, or counts as a **reason** for preferring one choice to the alternatives.
- Incentive is defined as something that **encourages** someone to do something or work harder.
- Incentive occur **before** an action or behaviour.
Punishment is the practice of imposing something unpleasant or response to an unwanted behavior.

Punishment is focused on reducing or eliminating unwanted behaviours.

Punishment is the reduction of a behaviour via a stimulus applied (positive punishment) or removed (negative punishment).
REWARDS AS REINFORCERS

• Skinner defined a reinforcer as any stimulus following a behaviour that increases the probability that the behavior will occur again.

• A punisher is any stimulus following a behaviour that decreases the probability that the behaviour will occur again.

• Reinforcers are desirable outcomes of behaviour, and punishers are aversive outcomes of behaviour.

• Reinforcers are most effective if given immediately after a response and are progressively less effective with longer delays.

• The delay between a response and a reinforcer can be bridged by a secondary reinforcer, a stimulus that gets its reinforcing power by previous association with some reinforcer.
HOW TO MAINTAIN BEHAVIOUR?

- A **SCHEDULE OF REINFORCEMENT** is some rule for when to deliver reinforcers in relation to responses.
- Schedules can be response-based or time-based.
  - **Response-based**: Delivering a reinforcer after every tenth response (a fixed ratio schedule)
  - **Time-based**: Reinforcing the first response after some minimum amount of time has passed since the last reinforcement (a fixed interval schedule).
Functional analysis - The relationship between environmental events and a particular response.

Any stimulus following a response that increases the probability of that response’s recurring is a reinforcer (Skinner, 1938).

It is difficult to say in advance what will be a good reinforcer for a given person in a given situation.
RESPONSE THEORY...THE PREMACK PRINCIPLE (PREMACK, 1959)

- Use the applied behaviour analysis. One of the earliest studies was conducted with young children.
- Premack gave the children two response alternatives, which were either eating candy or playing a pinball machine.
- These responses were measured based on which response was more probable for each individual child. Some of the children preferred one activity over the other.
- In the second phase of the experiment, the children were tested with one of two procedures.
- In one procedure, eating was the reinforcing response, and playing pinball served as the instrumental response - This means that children had to play pinball in order to eat candy.
- The results were consistent with the Premack principle, only the children who preferred eating candy over playing pinball showed a reinforcement effect.
• In another test, the roles of responses were reversed, and the results were identical to the first procedure.
• Only children who preferred playing pinball over eating candy showed a reinforcement effect.
• This study shows that the power of the Premack principle is that any high-probability activity can be an effective reinforcer for a response that the subject is less likely to perform, only if the subject prefers the high-probability activity (Domjan, 2010).
Response Theory...Elicitation Theory (Denny & Adelman)

- Requirement for reinforcement: A response be repeatedly elicited by some stimulus.
- Example: Animal gets food following lever pressing.

Lever Pressing → Running to Food → Response (Eating Food)
A stimulus would be reinforcing if it just activated the neural systems underlying responses even if an overt response did not occur.

Example: Animals will normally eat if the lateral hypothalamus is stimulated and food is available.
AROUSAL THEORY

- Arousal can be defined as:
  - ‘a state of readiness to perform that helps motivate performers’.
  - ‘the energised state, or the readiness for action that motivates a performer to behave in a particular way’.
  - ‘physiological state of alertness & anticipation which prepares the body for action’.
- Either increases or decreases in internal arousal can be reinforcing as long as they lead to a more optimal level of arousal.
- If it’s less - we stimulate it.
- People can suffer when arousal is too low.
  - Example: boredom.
- If it exceeds - we reduce stimulation
- People can suffer when arousal is too high.
  - Example: always anxiety
STIMULUS THEORY

- Stimulus is the primary term in stimulus-response theory, which refers to a number of learning theories that are theoretically based on conditioned bonds or associations between a stimulus and response.
- The associative bonds are formed through the repeated pairing of certain stimuli and certain responses.
- The two dominant stimulus-response theories are classical and operant conditioning theories.
LOCUS OF CONTROL

- Locus of Control is considered to be an important aspect of personality.
- Locus of Control refers to an individual's perception about the underlying main causes of events in his/her life.
- A locus of control orientation is a belief about whether the outcomes of our actions are contingent on what we do (internal control orientation) or on events outside our personal control (external control orientation)." (Zimbardo, 1985, p. 275)
  - Locus control strongly influences motivation.
  - Internal locus is linked with higher levels of need for achievement.
  - Individuals with a strong internal locus of control believe events in their life derive primarily from their own actions: for example, when receiving test results, people with an internal locus of control tend to praise or blame themselves and their abilities.
  - People with a strong external locus of control tend to praise or blame external factors such as the teacher or the test.
Figure 1: Locus of Control

External Locus of Control

- Outcomes outside your control – determined by “fate” and independent of your hard work or decisions

Internal Locus of Control

- Outcomes within your control – determined by your hard work, attributes or decisions
Imagine yourself looking into a mirror. What do you see? Do you see your ideal self or your actual self?

Your ideal, or imagined, self is the self that you aspire to be. It is the one that you hope will possess characteristics similar to that of a mentor or some other worldly figure.

Your actual self, however, is the one that you actually see. It is the self that has characteristics that you were nurtured (or in some cases born) to have.

Through analysis of the self and from feedback from others, an individual develops a self-concept.

This is a person’s knowledge of herself organised into a schema or framework and from which the information about the self can be retrieved and evaluated.

The self-framework might be organised around such domains as appearance, performance and social interactions with others.
FUNCTION OF SELF CONCEPT

To provide context

To provide information

To provide Integration

Functions of self-concept
1. To provide information
   • Provides information that will enable a person to make judgments about he can or cannot do.
   • Individuals whose self-concept underestimates their skills and talents could find it difficult and even impossible to develop aspirations that might motivate them to set difficult goals.

2. To provide context
   • Humans are inclined to view feedback regarding their behavior in the context of their enduring aspirations and goals.
   • Example: Receiving a grade of B might mean very little for someone whose only wish is to graduate but a great deal for someone who wants to be admitted to medical school.

3. To provide integration
   • The self-concept is a storehouse of information about the self and provides the global integration of that information.
   • From the integration of information comes our sense of identity.
Self-efficacy is defined as one’s judgment of how well (or poorly) one will cope with a situation, given the skills one possesses and the circumstances one faces (Bandura, 1986, 1993 & 1997).

A person’s self-efficacy is a strong determinant of their effort, persistence, strategizing, as well as their subsequent training and job performance.

Self-efficacy is also a much stronger predictor of how effectively people will perform a given task than either their self-confidence or their self-esteem.
**SELF-REGULATION**

- The ability to monitor and control our own behaviour, emotions, or thoughts, altering them in accordance with the demands of the situation.
- It includes the abilities to inhibit/prevent first responses, to resist interference from irrelevant stimulation, and to persist on relevant tasks even when we do not enjoy them.
MATURE SELF-REGULATION REQUIRES SEVERAL SOPHISTICATED COGNITIVE SKILLS.

1. Awareness of the demands of any given situation: **self-awareness**.
2. Consistent monitoring of our own behaviour, thoughts, and strategies: **self-monitoring**.
3. Consideration of how successfully we are meeting the demands of the situation: **self-evaluation**.
4. The ability to change aspects of our current functioning as needed to fit the situation or to accomplish a goal: **self-reaction**.
40 male first-line supervisors were randomly assigned to a behavioural modelling training programme or to a control group.

The training was designed to improve supervisors' interpersonal skills in dealing with their employees.

The training program produced highly favourable trainee reactions, which were maintained over time.
Moreover, the performance of the trainees was significantly better than that of supervisors in the control group on a learning test administered 6 months after training, on behavioural simulations collected 3 months after training, and on performance ratings collected on the job 1 year after training.

After the control group received the training, they achieved significant improvement in their supervisory skills and did not differ from the trainees who had originally undergone the training on any of the measures.
Behaviourism focuses on one particular view of learning: a change in external behaviour achieved through a large amount of repetition of desired actions, the reward of good habits and the discouragement of bad habits.

Reinforcers can be use in our daily life to fix behaviour and as a management tool.

Besides reinforcers, self-concept, self-efficacy and self-regulation also play their own role in modifying human behaviour.
Thank You!!!