UNIT

10

# Approaches to Learning

## Introduction

Examine the list of behaviours given below:

- A student wishes her teacher each time she sees him.
- A five year old child when playing with his dolls, behaves exactly like her mother does with her.
- 'Homely' a characteristic that means being plain looking in European culture signifies a good and caring person in Indian culture.
- Reena, immediately offers her seat in the bus to an old woman whom she sees standing.
- Long after a class VII student has learnt multiplication tables, he realizes that he can actually derive the tables by simple methods.

You must have realized that these are some examples of every day behaviours which you observe . However, they are important, as learning is inherent in each of them. How this learning occurs, what mediates it, and what constitute its basic elements have been explained differently by various researchers and theorists. Let us try to see what they have to say.

## Learning outcome

After reading through this unit, your will be able to:

- understand the concept of learning;
- appreciate the different approaches to learning and explain them;
- evaluate the learning theories with reference to how they explain the phenomenon of learning;
- understand the educational implications of the approaches to learning.

## Approaches to learning

You must have noticed in the examples given to you in the introduction, that we learn many things and the basis on which we learn seems to be very diverse. Somewhere the experience is important, at other places the motivation, the rewards and the consequences of what we do make the difference. Sometimes we process what we see cognitively and enhance our understanding of it. There are also occasions when some need or desire in us determines what we will learn and focus on. These variations in fact form the core of the approaches to learning. Each approach gives its own interpretation of the process of learning. Let us now try to understand them one by one.

In this section you will be exposed to six important approaches to learning. The salient features of each approach with illustrative examples will be discussed in the hope that from the insights which you get, you will develop a more informed understanding of how persons, especially your students, learn.

The six approaches discussed are:

- Classical conditioning
- Operant conditioning
- Social learning
- Information processing
- Constructivist approach
- Humanistic approach

## *Classical conditioning*

Classical conditioning focuses on the **learning of involuntary emotional or physiological responses** such as fear, increased heartbeat, salivation, or sweating, which are sometimes called 'respondents' because they are automatic responses to stimuli. Through the process of classical conditioning, humans and animals can be **trained to react involuntarily to a stimulus that previously had no impact on them** or had a very different effect. The stimulus comes to **elicit** or bring forth the responses automatically.

Classical conditioning was discovered by Ivan Pavlov, a Russian physiologist in 1920. In his laboratory, Pavlov was plagued by a series of setbacks in experiments on the digestive system of dogs, He was trying to determine how long it took a dog to secrete digestive juices after it had been fed, but the intervals of time kept changing. At first, the dogs salivated in the expected manner while they were being fed. Then the dogs began to salivate as soon as they saw the food. Finally, they salivated as soon as they saw the scientist enter the room. The white coats of the experimenters and the sound of their footsteps all started salivation. Pavlov decided to make a detour from his original experiments and examine these unexpected interferences in his work.

In one of his first experiments, Pavlov began by sounding a tuning fork and recording a dog's response. As expected, there was no salivation. At this point, the sound of the tuning fork was a neutral stimulus because it brought forth no salivation. Then Pavlov fed the dog. The response was salivation. The food was an **unconditioned stimulus (US)** because no prior training or **conditioning** was needed to establish the natural connection between food and salivation. The salivation was an **unconditioned response (UR)**, again because it occurred automatically- no conditioning was required.

Using these three elements- the food, the salivation, and the tuning fork- Pavlov demonstrated that a dog could be **conditioned** to salivation after hearing the tuning fork. He did this by contiguous pairing of the sound with food. At the beginning of the experiment, he sounded the fork and then quickly fed the dog. After Pavlov repeated this several times, the dog began to salivate after hearing the sound but before receiving the food. Now the sound had become a **conditioned stimulus** (CS) that could bring forth salivation by itself. The response of salivating after the tone was now a **conditioned response** (CR).

Pavlov's work also identified three other processes in classical conditioning: **generalization, discrimination,** and **extinction**. After the dogs learned to salivate in response to hearing one particular sound, they would also salivate after hearing similar tones that were slightly higher or lower. This process is called **generalisation** because the conditioned response of salivating generalized or occurred in the presence of similar stimuli. Pavlov could also teach the dogs **discrimination** - to respond to one tone, but not to others that are similar- by making sure that food always followed only one tone, not any others. **Extinction** occurs when a conditioned stimulus (a particular tone is presented repeatedly but is not followed by the unconditioned stimulus (food). The conditioned response (salivating) gradually fades away and finally is "extinguished"- it disappears altogether.

Pavlov's findings and those of other researchers who have studied classical conditioning have implications for all of us, especially teachers. It is possible that many of our **emotional reactions** to various situations are learned in part through **classical conditioning**. For example, Renu's trembling hands when she saw her college supervisor might be traced to previous unpleasant experiences. Perhaps she had been embarrassed during past evaluations of her performance, and now just the thought of being observed elicits a pounding heart and sweaty palms. We must remember that emotions and attitudes as well as facts and ideas are learned in classrooms. This **emotional learning** can sometimes interfere with academic learning. Procedures based on classical conditioning can also be used to help people learn more adaptive emotional responses, as shown in the figure.

1. **Associate positive events with learning task**

   - Make reading appealing by setting up an active book club where discussions, reviews and literary activities take place.
   - Teaching science by linking up concepts with the biographies of scientists.

   **(Principle of Positive Reinforcement)**

2. **Reducing anxiety in learners**

   - If a student is afraid of speaking in front of the class, let the student read a small paragraph to a small group, then read his favourite story to his friends and gradually read the text or speak fluently in front of the entire class.

   **(Principle of Generalization)**

3. **Recognise differences and similarities among situations**

   - Explain to students to avoid taking lifts from strangers, but not from relatives and acquaintances.
   - Assure students who are anxious to take, University exams so that these are just like any other achievement test.

   **(Principle of Discrimination)**

**Figure 1 Using principles of classical conditioning for effective adjustment and adaptation in classroom situations**

### *Operant conditioning*

So far we have concentrated on the automatic conditioning of involuntary responses such as salivation and fear. Clearly, not all human learning is so automatic and unintentional. Most behaviours are not **elicited** by stimuli, they are **emitted** or voluntarily enacted. People actively **operate** on their **environment** to produce different kinds of consequences. These deliberate actions are called **operants**. The learning process involved in operant behaviour is called **operant conditioning** because we learn to behave in certain ways as we operate on the environment.

Thorndike established the basis for operant conditioning, but the person generally thought to be responsible for developing the concept is B.F. Skinner (1953). Skinner began with the belief that the principles of classical conditioning account for only a small portion of learned behaviour. Many human behaviours are operants, not respondents. Classical conditioning describes only how existing behaviours might be paired with new stimuli; it does not explain how new operant behaviours are acquired.

Behaviour, like response or action, is simply a word for what a person does in a particular situation. Conceptually, we may think of a behaviour as sandwiched between two sets of environmental influences: those that precede it, **antecedents,** and those that follow it **consequences**. This relationship can be shown very simply as **Antecedent-Behaviour-**

**Consequence** or **A-B-C**. As behaviour is ongoing, a given consequence becomes an antecedent for the next ABC sequence. Research in operant conditioning shows that operant behaviour can be altered by changes in the antecedents. the consequences, or both. Early work focused on consequences, often using rats or pigeons as subjects.

According to the operant conditioning view, consequences determine to a great extent whether a person will **repeat** the behaviour that led to the consequences. The **type** and **timing** of consequences can **strengthen** or **weaken** behaviours. We will look first at consequences that strengthen behaviour which is called reinforcement. Reinforcement is commonly understood to mean **reward**, this term has a particular meaning in psychology. A **reinforcer** is any consequence that strengthens the behaviour it follows. So, by definition, reinforced behaviours **increase** in **frequency** or **duration**. Whenever you see a behaviour persisting or increasing over time, you can assume the consequences of that behaviour are reinforcing for the individual involved. The reinforcement process can be diagrammatically be presented as follows:

**CONSEQUENCE** **EFFECT**

Behaviour ⟶ Reinforcer ⟶ Strengthened or repeated behaviour

We can be fairly certain that food will be a reinforcer for a hungry animal, but what about people? It is not clear why an event acts as a reinforcer for an individual, but there are many theories about why reinforcement works. For example, some psychologists suggest that reinforcers satisfy needs, while other psychologists believe that reinforcers reduce tension or stimulate a part of the brain (Recline, 1991.) Whether the consequences of any action are reinforcing probably depends on the **individual's perception** of the event and the **meaning** it holds for her or him. For example, students who repeatedly get themselves sent to the principal's office for misbehaving may be indicating that something about this consequence is reinforcing for them, even if it doesn't seem desirable to you.

Reinforcers are those consequences that **strengthen** the associated behaviour (Skinner, 1952,1989). There are two types of reinforcement. The first called **positive reinforcement**, occurs when a behaviour produces a new response. Examples include wearing a new outfit receiving many compliments, or falling out of your chair producing cheers and laughter from classmates, or giving a good answer in class and receiving compliments for it.

You will notice that positive reinforcement can occur even when the behaviour being reinforced (falling out of a chair) is not 'positive' from the teacher's point of view. In fact, positive reinforcement of inappropriate behaviours occurs unintentionally in many classrooms. Teachers help maintain problem behaviours by inadvertently reinforcing them. For example, a student who doesn't like math is asked to leave the class when found misbehaving / disturbing others.

When the consequence that strengthens a behaviour leads to the **appearance** or **addition** of a new stimulus, the situation is defined as positive reinforcement. In contrast, when the consequence that strengthens a behaviour is marked by the **disappearance/subtraction** of a stimulus, the process is called **negative reinforcement**. If a particular action leads to stopping, avoiding, or escaping an aversive situation, the action is likely to be repeated in a similar situation. Consider students who continually "get sick" right before a test and are sent to the sick room. The behaviour allows the students to escape aversive situations-tests- so getting "sick" is being maintained, in part, through negative reinforcement. It is negative because the stimulus (the test) disappears; it is reinforcement because the behaviour that caused the stimulus to disappear (getting 'sick') increases or repeats itself. It is also possible that classical conditioning plays a role. The students may have been conditioned to experience unpleasant physiological reactions to tests.

The 'negative' in negative reinforcement does not imply that the behaviour being reinforced is necessarily negative. The point is to induce threat to strengthen positive behavior.

Negative reinforcement is often confused with **punishment**. The process of reinforcement (positive or negative) always involves strengthening behaviour. **Punishment,** on the other hand, involves **decreasing** or **suppressing behaviour**. A behaviour followed by a 'punisher' is less likely to be repeated. Again, it is the effect that defines a consequence as punishment, and different people have different perceptions of what is punishing. One student may find suspension from school punishing, while another student wouldn't mind at all. The process of punishment is diagrammatically presented as follows:

| CONSEQUENCE | | EFFECT |
|---|---|---|
| Behaviour | ⟶ Punisher | ⟶ Weakened or decreased behaviour |

It is important for you to understand that when students are learning a new behavior, they will learn it faster if they are reinforced for every correct response. This is a **continuous reinforcement schedule**. Then, when the new behaviour has been mastered, they will maintain it best if they are reinforced intermittently rather than every time. An **intermittent reinforcement schedule** helps students to maintain skills without expecting constant reinforcement. It may be done on the basis of **ratios** of work completed or **intervals** of time.

### *Social learning approach*

In recent years, most behaviorial psychologists have expanded their view of learning to include the study of **cognitive processes** like thoughts, expectations, beliefs, etc., that cannot be directly observed. A prime example of this expanded view is Albert Bandura's **Social cognitive theory**. Bandura demonstrated that modelling otherwise known as **imitation** or **observational learning** is the basis for a wide range of learning, especially in children. He recognised that children may acquire many favourable and many unfavourable responses in the absence of direct rewards and punishments, simply by watching and observing others around them. This theory places a strong emphasis on how children think about themselves and other people. It also states that children become gradually **more selective** in what they **imitate**. They consciously select and imbibe certain behaviour (learning by introjection). Observational learning actually challenges the behaviourist idea that cognitive factors are unnecessary in an explanation of learning. It suggested that if people can learn by watching, they must be focussing their attention, constructing images, remembering, analysing and making decisions that affect learning.

Bandura further differentiates between **enactive learning,** i.e., learning by doing and experiencing the consequences of your actions and **vicarious learning** i.e., learning by observing others. Let us explore and study this idea of learning by observing others, further.

#### Learning by observing others

There are two main modes of **observational learning**. First, observational learning can take place through **vicarious reinforcement**. This happens when we see others being rewarded or punished for particular actions and then modify our behavior as if we had received the consequences ourselves. For example, if you compliment two students on the attractive illustrations and graphics in their laboratory reports, several other students who observe your compliments may turn in illustrated lab reports next time. This demonstrates vicarious reinforcement. **Punishment** can also be **vicarious.** You may slow down on a stretch of a road after seeing several people get tickets for speeding there.

College students are often known to give up many weight reduction diets after they see their friends suffering bad health and vice versa.

In the second kind of observational learning, the observer imitates the behavior of a model even though the model receives no reinforcement or punishment while the observer is watching. Often the model is demonstrating something the observer wants to learn and expects to be reinforced for. For example, mastering the proper way to position hands while playing a musical instrument or the correct way to assemble laboratory equipment.

**Imitation** can also however occur when the observer simply wants to become more like an admired or high-status model, thus indicating that observation can be a very efficient learning process. Many college students fashion their dress, their bodies, their styles of talking, etc., on different models who they hold in high esteem. They also choose their career goals inspired by persons whom they hold in high regard. These persons become their role models.

Bandura identifies three forms of reinforcement that can encourage observational learning. First, of course, the observer may reproduce the behaviors of the model and receive **direct reinforcement**, as when a student cricketer successfully executes a boundary shot and the coach/model says, 'Excellent!' But, the reinforcement need not be direct; it may be **vicarious**. As mentioned earlier, the observer may simply see others reinforced for a particular behavior and then increase his or her production and following of that behavior. Most television advertisements hope for this kind of effect. People in commercials become deliriously happy when they drive a particular car, or drink a specific juice and the viewer is supposed to do the same. The viewer's behavior is reinforced vicariously by the actors' obvious pleasure. The final form of reinforcement is **self-reinforcement**, or controlling your own reinforces. This sort of reinforcement is important for both students and teachers. We want our students to improve not because it leads to external rewards but because the students value and enjoy their growing competence. As a teacher you must have experienced that sometimes self-reinforcement is all that keeps you going. Social learning and cognition are influenced by a number of factors. Examine the following box to gain an understanding of these.

| Characteristic | Effects on modeling |
|---|---|
| 1. Developmental status | Improvements with development include longer attention span and increase capacity to process information, use cognitive strategies, compare performance with memorial representative and adopt interior motivators. |
| 2. Various consequences | Consequences to models convey information about behavioural appropriateness and likely outcomes of actions. Valued consequences motivate learners. Similarity in attributes and competence signal appropriateness and heighten motivation |
| 3. Outcome expectations | Observers are more likely to perform modeled actions which they believe are appropriate and will result in rewarding outcomes. |
| 4. Goal setting | Observers are more likely to attend to models who demonstrate behaviors that help observers attain goals. |
| 5. Model prestige and competence | Competent and high status models are favoured more |
| 6. Self-efficacy | Observers attend to models when they feel they are capable of learning or performing the modeled behaviour. Observation of similar models affects self-efficacy (if they can do it so can I) |

**Figure 2 Factors in social cognitive theory**

It must be clear to you from what you have read in this box, that there is tremendous potential for explaining how learning occurs through the social cognitive theory, at all stages in the human life span. In the case of adolescents and youth, this appears to be

an even more convincing explanation of their learning. Some of the implications of this approach may be presented diagrammatically in the following figure.

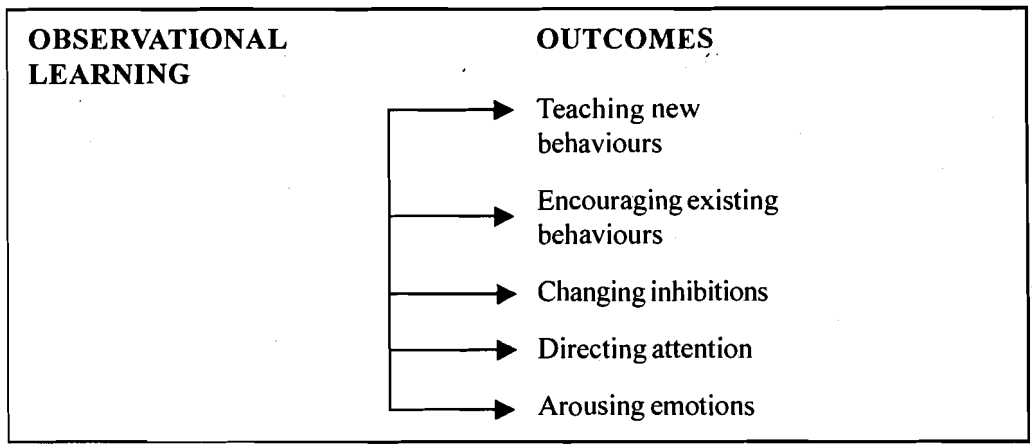


**Figure 3 Outcomes of observational learning**

## *Information processing approach*

Information processing is a cognitive theory that examines the way knowledge enters and is stored in and retrieved from memory. It has been the most prominent cognitive theory during the twentieth century, and has important implications for teaching. Think back for a moment to courses you have taken during your schooling. You probably studied geography, perhaps chemistry, and now you are taking educational psychology. In geography, you examined the face and makeup of the earth, and in chemistry, you studied the structure of the atom. Because you can only directly experience a small portion of the earth, you doubtlessly made frequent use of maps and globes. The globe is a miniature representation of the earth, faithful in shape and proportion - a model. Like-wise, in chemistry you cannot directly observe the atom with all its individual parts, so scientists created a model, to help people visualize it. In this case the model is a representation that allows learners to visualize what they cannot observe directly.

People encounter a similar situation when they try to visualize what occurs during information processing. They cannot directly observe the structures and mechanisms that operate when they process information, so they use a model to help represent this process.

The information-processing model of learning is based on a computer analogy.

The human-computer analogy is based on the observation that both computers and humans engage in cognitive processes such as learning (or acquiring knowledge), remembering (or retrieving knowledge), making decisions, answering questions, and so on. Computers perform cognitive tasks by processing information – taking symbols as input, applying operators to the input, and producing output – so it follows that perhaps humans are also information processors.

The model has three major components:

- Information stores
- Cognitive processes
- Metacognition

**Information stores** are repositories used to bold information. They are analogous to computer files, filing cabinets, or address books where people store information. The information stores in the information-processing model are sensory memory, working memory, and long-term memory.

The second component consists of **cognitive processes**, intellectual actions that transform information and move it from one store to another. These processes include attention, perception, rehearsal, encoding and retrieval. Cognitive processes are analogous to the programs that direct and transform information in computers.

The third component of the information processing model is **metacognition**, which is knowing about and having control over cognitive processes.

**Sensory memory** is the information store that briefly holds stimuli from the environment until they can be attended to and further processed. Sensory memory is critical to further processing. In trying to read, for example, if the words at the beginning of a sentence were lost from your sensory memory before you got to the end, it would be impossible to get any meaning from the sentence. The same is true for spoken language. Sensory memory allows you to hold information long enough to transfer it to working memory, the next store.

**Working memory** is the information store that retains information as the person consciously works with it. It is where deliberate thinking takes place. It is a 'workbench' of memory that temporarily holds information as it is being used or worked on. Working memory has two important characteristics: it screens information that comes into it, and it is limited in capacity and duration (without rehearsal, it can hold about five or nine items for about 10 to 0 seconds for adults).

**Long term memory** is our permanent information store. In a sense, it's like a library with millions of entries and a network that allows them to be retrieved for reference and use.

The information processing approach gives us a very significant and meaningful understanding of how individuals cognise and comprehend their world. It also includes explanations about their processing, storage and retrieval skills and abilities which are very convincing. In the case of young adults particularly, this approach appears to be very relevant and a suitable one for understanding the ways in which they learn.

## *Constructivist approach to learning*

This view emphasizes the **active role** of the learner in building understanding and making sense of information. There is no one constructivist theory of learning. Some theories focus on how individuals **make meaning**; others emphasize the **shared, social construction** of knowledge. Individual **constructivists** are concerned with how individuals build up certain elements of their cognitive or emotional apparatus. They are interested in individual knowledge, beliefs, self-concept, identity, etc – all of which deal with the inner psychological life of persons. Vygotsky's **social constructivism** emphasizes that **social interaction, cultural tools and activity** shape individual development and learning. By participating in a broad range of activities with others, learners internalize the outcomes produced by working together. They acquire new strategies and knowledge of the world and culture. Although Vygotsky's theory is interested in understanding developments within an individual it relies heavily on **social interactions** and the **cultural context** to explain learning. He is thus both an individual and social constructivist. For example, in his concept of the zone of proximal development – the area where a child can solve a problem with the help (Scaffolding) of an adult or more able peer – has been called a place where culture and cognition create each other. Culture creates cognition when the adult uses **tools** and **practices** from the culture (language, maps, music, stories) to steer the child towards goals the culture values (reading, writing, dancing, singing). The term constructivism is also used to talk about how public knowledge is created in disciplines like Science, Math, Economics, History, etc. Even though there is no single constructivist theory, many constructivist approaches recommend:

- Complex, challenging learning environments and authentic tasks
- Social negotiation and shared responsibility as a part of learning

- Multiple representations of content
- Understanding that knowledge is constructed
- Student - centred instruction

The constructivists believe that students should not be given simplified problems and basic skills drills, but instead should encounter **complex learning environments** with ill structured problems. Complex problems are not simply difficult ones. They have many parts. There are multiple, interacting elements in the problems and multiple solutions are possible. Further, these complex problems should be embedded in **authentic tasks** and activities which mean the kind of situations that students will face as they apply what they are learning to the real world. The constructivists believe that higher mental processes develop through **social negotiation** and interaction, so collaboration in learning is valued. Further, they believe in **multiple representation of content** which uses different analogies, examples and metaphors, so that students don't oversimplify and generalize one explanation to different contexts. Their conceptualization of **student – centred instruction** means, keeping the students **own efforts to understand** at the center of the teaching-learning process. The strategies on the part of the teacher based on this approach would include **inquiry** and **problem - based learning cooperative learning, dialogue** and **instructional conversations,** and **cognitive apprenticeships**. Let us discuss the meaning of these terms.

**Inquiry learning** refers to an approach in which the teacher presents a puzzling situation and students solve the problem by gathering data and testing their conclusions.

In **problem - based learning**, students are confronted with a real problem that has meaning for them. The problems must be realistic, but not necessarily having the 'right answers'.

**Cooperative learning** is an arrangement in which students work in mixed-ability groups and are rewarded on the basis of the success of the group. It is based on face-to-face interaction, positive interdependence individual accountability, collaborative skills and facilitative group processing.

**Instructional conversations** refer to situations in which students learn through interactions with teachers and/or other students.

**Cognitive apprenticeships** refer to a relationship in which a less experienced learner acquires knowledge and skills under the guidance of an expert. Cognitive apprenticeship usually involves the following:

- Students observe an expert (usually the teacher) **model** the performance
- They get external support through **coaching** or tutoring and conceptual **scaffolding**.
- They then **reflect** on their progress and explore new ways to apply what they are learning, especially those which they have not practiced at the master's side.

The constructivist approach to learning thus holds tremendous potential for implementation in college classrooms as well.

## *Humanistic approach*

Humanism opposes the mechanistic, biological reductionist approach which reduces humans to assembly line productions, governed by their genetic blue-prints. Rather, it emphasizes the **uniqueness** and **value of every person** determined by his/her **need for self actualization**. This view of behaviour focuses on the **subjective** qualities of human experience (the phenomenological reality) and the **personal meanings of experiences** to a person. It lays stress on the positive aspects of people, their inner directed and

conscious motivations and their self-directed goals with emphasis on freedom of choice. 'The person in so far as he is a real person, is his own main determinant. Every person is, in part, his own project and makes himself' (Maslow, 1968) is the main premise on which humanism rests.

From a humanistic point of view, a major purpose of education is to help develop each student's individuality, to assist him in realizing the potential that already exists within him. An important implication for the teaching learning process from this point of view is the emphasis on **helping** or **facilitating** so that each student can **decide** for himself who he is and what he wants to be. To accomplish this, Humanists advocate **student-centred pedagogy** and **discovery oriented instructional procedures**. This school of thought, believes in accelerating the affective growth of students with critical thinking, self reliance, and commitment to learning achieved through **cooperative learning** and **open classrooms**, where students learn by exploring their external environments, making decisions and internalizing in all they have learnt.

The role of the teacher is less that of a director, coercer, or manipulator and more that of one who **assists** and **helps** students in their **process of becoming**. Humanistic teachers usually begin where the students' perceptions are and not where their own perceptions happen to be.

Two elements of the teaching – learning process which are very significant in humanistic psychology, are the **student - teacher relationship** and **classroom climate**. Carl Rogers (1967), a prominent thinker in the humanistic movement, suggested that effective teachers should embody three qualities that promote the student teacher relationship

- They should be **genuine**, real people, without facades, who embrace their feelings as their own.
- They should be **accepting**, viewing students as worthy individuals in their own right.
- They should be **empathetic** and able to consider teaching - learning experiences from students' points of view.

Classroom climate is an outgrowth of the collective student – teacher relationships that form over time. Humanistic classrooms are safe environments where students believe they can learn and are expected to do so. Standards remain high but attainable. Each person is valued because he/she is an innately valuable human being.

The humanistic approach thus emphasizes the importance of climate building and attitudinal preparation on the part of teachers in making the teaching - learning experience for students memorable, enjoyable and enriching at the helm of the teaching – learning process. This has many implications for college learners as well.

## *Evaluation of the approaches to learning*

From the brief overview presented in this unit, it can be seen that learning theories have a rich and diverse heritage. In the early 20th century, came the school of **behaviourism**, founded by J.B. Watson which was determined to convert psychology into a science. Watson viewed it as a purely objective experimental branch of natural science. Its theoretical goals were prediction and control of behavior. Behavior referred to covert behavior and studied associations. The mind was perceived as a black box and Watson felt that mental events should be ignored as they could not be studied or observed directly and were not scientifically measurable. The behaviourists denounced introspection or the existence of any higher order cognitive functioning. Consciousness, they felt should be left to philosophers. Thus, the focal point of epistemological inquiry for centuries was looked upon as a hindrance by behaviorists and replaced by prediction and control of behaviour.

However with the development of new research, a paradigm shift took place within the school of behaviourism dividing it into the behaviorists of yore, now called **radical behaviourists** and the **neo-behaviorists** who had a softer and more liberal approach towards learning. The social learning theory advanced by Bandura is one such example. This theory although based, in part on a model of operant conditioning, recognises the fundamental importance of our ability to symbolize, to imagine, to ferret out cause and effect relationships and to anticipate the outcomes of our behaviour making it as much cognitive as behaviouristic. Social learning theory empowers the human being as a thinking, knowing, rational individual in the process of absorption from the environment and in turn influencing it, all the same.

With the advent of post second world war, Communications technology, coupled with the growth of **cognitivism**, the world of learning tilted favourably towards the **information - processing approach** which views humans as active processors of information which they receive from the environment and then act on that information. It emphasises the S-O-R psychology recognising the important role that the organism (O) plays in symbolizing, planning, analysing, engaging in insightful action i.e. processing the stimulus (S) to produce or create a reaction or response (R). The important point about information - processing psychology is, that it attempts to understand and specify the internal mechanisms. It is not simply a matter of expectation or processing. The whole point is that one tries to be very specific about the exact stages of processing that take place and to spell out the properties of the internal mechanisms.

Then came the third force of psychology - humanism and its influence on learning. This concerned itself with empowering the human being as an **active, rational** being en route to **self improvement** and **self actualization**. The humanists believed in the uniqueness and the individuality of man as opposed to a stimulus driven person. According to them, learning is self directed, aimed at self improvement, which can be achieved through open communication, a real caring for people and genuineness. It emphasises the individual's preference or learning style putting a proactive learner in charge of selecting, symbolizing and processing potential learning material. The choice of what to learn and how to learn is uniquely personalised, is criterion referenced and encourages mastery learning thus enabling the individual to realize his potential and make optimum utilization of resources at his disposal.

Last but not the least, we cannot deny the influence of beliefs, traditions and values and social experience on cognitive development. The **situated learning approach** stresses upon the socio-cultural dimension in shaping our learning. This approach propounded by Lev Vygotsky, maintains that various things we learn like facts, concepts, rules, problem solving skills and attitudes are strongly influenced by the kinds of social interactions that justify our culture. Vygotsky's notion of producing cognitive development by embedding instruction in one's culture and within a student's zone of proximal development is an attractive one, as it highlights the impact of the socio-cultural environment. It is the only theory which contextualises leaning, embedding it with in the cultural factors and the process of socialization.

One reason for studying learning from different perspectives is that as a teacher it enables you to use a variety of instructional techniques to achieve diverse objectives in the cognitive, affective and psychomotor domains and orients you to a large repertoire of view points, each significantly contributing and adding value to the concept of learning.

In sum, classroom learning is too complex a behavior to be fully understood from one point of view. Besides, concepts like reinforcements, shaping, modeling, encoding, retrieval from memory, analyzing etc. all complement each other even though they represent different perspectives.

## *Summary*

This unit deals with some of the important approaches to learning like classical conditioning, social learning, information processing, constructivist approach, etc., each representing

a separate orientation to learning, thereby helping you to achieve a multi-dimensional view of learning. You must have also appreciated the enormity and diversity of work that exists in this area.

The unique methods put forth by each of the approaches are also discussed to enable you as a teacher to use differential instructional techniques, thus enhancing the teaching - learning process by making it more meaningful and an educationally enriching process. The college classroom has been particularly kept in mind.

A summative evaluation of the different approaches to learning is also presented, so as to enable you to chronologically place these theories as antecedents as well as consequences of each other, in the developmental history of learning theories. This must have enabled you to develop a perspective of your own.

## *Unit-end exercises*

1. What do you understand by classical and operant conditioning? What is the difference between a response 'elicited' and a response 'emitted'?
2. How would you set up a humanistic classroom? What benefits would accrue to your learners from it?
3. The social learning approach to understanding the process of learning is very relevant in the context of young adults in India. Discuss.
4. 'Constructivism' places the learner at the center of the learning process. Discuss the implications of this statement for organizing the teaching –learning processes in the classroom.
5. According to you, which approaches to learning are the most relevant for young adults and why?

## *Suggested readings*

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