One way to examine such an assumption is to examine various species, to determine which animals are capable of learning by observation, and which have a culture.

Educational Implications : This method is based on the maxims of teaching, i.e. proceed from whole to the parts. The complete object is grasped first, and its parts are comprehended later. Therefore, the teacher should present the whole or complete object to the students and then proceed to explain its parts.



CHECK YOUR PROGRESS

Q.5. Mention two different types of method of learning?

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Q.6. Which method of learning is applicable to teach mathematics in a group of young children?

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Q.7. Which method is based on maxims of teaching?

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Q.8. What are the three major laws of learning?

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Q.9. When do we apply the law of use?

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Q.10. Children learn more by imitation than by understanding. (True or False)

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Q.11. Mention two types of imitation.

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9.3.2 Nature of Learning

We are by nature curious and creative. It is our natural desire to want to acquire knowledge, but the way in which we learn and our reasons for learning can be very different. Some people learn best when they see what is being taught, while others process information best through learning. Many will prefer movement or touching to make the learning process complete. The best approach to learning styles is a multi-sensory approach. This type of environment allows for children, who are primarily kinetic or motor learners, to be able to learn through touch and movement; it allows the visual learner to see the concept being taught, and the auditory learner to hear and verbalize what is being taught. Ideally, the best learning takes place when the different types of processing abilities can be utilized.

Learning as adjustment : Right from birth , the individual is faced with the problem of making adjustment to his physical as well as social environment . Learning is the proper means to achieve this end.

Let us take an example: on the very first day of school, almost every child cries. But gradually they adjust with the school environment.

Learning as development : Here the development is free to move towards either direction – positive or negative. There is no guarantee that the individual will always pick-up good knowledge, desirable habits, interests and attitudes. He has equal chances to pick - up opposite of this.

Example : Learning and Development is one of the most happening activities. From classroom facilitations to interactive workshops and knowledge sharing forums, we run the range of development.

Learning and behavioural change : Learning brings changes in the behaviour of an individual through which the individual gets himself adjusted to the changing situation. 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.

Learning and maturation : Learning is a natural developmental process. It is the growth which takes place within the individual. Maturation and learning are closely related to each other. Maturation helps in the process of learning which can only take place if the stages for that type of learning has been achieved through a process of maturation .

Learning and Motivation : Motivation is the process of affecting, supporting and regulating activity. In the field of education, it is assumed that an individual's action and behaviour is determined by some internal stimuli. Thus it can be said that motivation is that force which implies or incites. Motivation is an important, in fact, the most important factor in learning. The teacher cannot arouse the interest of the children without motivation, without which no learning is possible. Motivation is important in learning due to moulds the behaviour of the child; develop their personality in the right manner and proper motivation helps to maintain discipline.



CHECK YOUR PROGRESS

Q.1. State whether the following statements are true or false.

i) Learning is modification of behaviour.

ii) Learning starts after school education.

iii) Learning means development of knowledge.

iv) Maturation and learning are closely related.

v) Learning is adjustment.

Conscious or deliberate imitation : Sometimes we may like the habits , gestures , way of talking of somebody else which results in our attempt to copy them. We consciously imitate them and try to develop their qualities in us . Such imitation is known as conscious imitation.

Educational Implications : The teacher who teaches in small classes can make use this method to a greater extent, as children usually learn by imitating their elders. The teachers can also be role models for the elder students and try to develop the desirable qualities in them.

c) **Learning by observation :** This method of learning is based on the principles of Gestalt theory of learning. It is also known as learning by insight or insightful learning. Learning by observation means that an individual perceives the things as a whole, or learning takes place when the whole pattern or situation appears clearly and distinctly in the mind of the learner.

Creatures that can learn by observation have an important advantage over those who can't learn the hard lessons. Hard things learned by one individual can be readily copied by others. Infants can learn what foods to eat, what foods to avoid, what animals are dangerous predators, what animals are preys, and so on.

Several animals have been found to learn from observation, including Chimpanzees, Dolphins, birds such as the Jackdaw, and others. Different groups of animals in distinct regions have distinctive habits, and might be said to have primitive cultures. Indeed, the ability to learn from observation is probably a cornerstone of culture; without such ability, it is unlikely that a culture might develop. Of course, human culture depends on other learning mechanisms beyond simple learning by observation, but here is a conjecture for you:

*Gary's Conjecture on Culture: Any species that can learn from observation can develop a culture.

9.5 METHODS OF LEARNING

On the basis of extensive research and study the psychologists have given us different methods of learning, some of them are :

a) **Learning by doing or trial and error method.**
b) **Learning by imitation.**
c) **Learning by observation.**

a) **Learning by doing :** It is a simple method of learning . It is also called trial and error method. When an individual is doing something for the first time, then he is likely to make several mistakes. After repeating the process for a few number of times, learning process will stay permanent gradually.

This method of learning is common to children as well as adult. For example, when a baby learns to walk or takes food by a spoon, he or she commits many mistakes at the beginning. But correct responses will start appearing after a few repetitions.

Educational Implications : This method can be very useful in classroom teaching. The teacher should try to build up the bond or connections between the stimuli and the response. The child should made practice what ever has been taught again and again. More particularly in subject like mathematics and science, this method must be used. The child may make mistakes in the starting but gradually the number of mistakes will come down and he will be able to learn properly and perfectly.

b) **Learning by imitation :** Imitation means copying the acts of somebody else. Children learn more by imitating than by understanding. They learn to talk or to develop habits by imitating their parents and elders.

We can divide imitation into two types:

Unconscious or spontaneous imitation : Sometimes we unknowingly imitate others' way of talking , walking etc.. Such imitation is unconscious imitation.

9.4 LAWS OF LEARNING

Different psychologists have defined various laws of learning. Amongst these, psychologist Thorndike formulated three major laws of learning which are widely accepted and applied in the field of education. They are :

i) **Law of Readiness :** When a person is ready to act or to learn, he acts or learns more effectively and with greater satisfaction than when not ready. Before actual learning, one must be mentally prepared.

A person learns best when he has the necessary background, a good aptitude, and is ready to learn. He does not learn much if he sees no reason for learning. Getting a student ready to learn is usually the teacher's job. A clear objective and a good reason for learning sometimes help to motivate students to learn even when they start off not caring. A student who is usually ready to learn meets the instructor halfway. Sometimes the instructor can do little to create in the learner the readiness to learn. Outside responsibilities, overcrowded schedules, health, finances, or family affairs can take away a student's desire to learn.

Educational Implication : The teacher should make proper use of this law. Whenever we are physically sick or mentally disturbed and at that time if some thing is taught to us, we cannot pay attention to it and as a result do not learn it.

ii) **Law of Exercise :** Those things most often repeated are the best learned. This is the basis for practice and drill. The mind rarely retains, evaluates, and applies new concepts or practices after only one exposure. A student learns by applying what he has been taught. Every time he practices, his learning continues. There are many types of repetitions. These include student recall, review and summary and manual drill and physical applications. All of these serve to create learning habits.

Laws of exercise are mainly those of respective habits, as in rote memorizing or the acquiring of muscular skills. Law of exercise has two sub–parts: (a) Law of use and (b) Law of disuse.

a) **Law of use :** When a modifiable connection is made between a situation and a response keeping other things equal, the strength of that connect is increased .

b) **Law of disuse :** When a modifiable connection is not made between a situation and a response over a period of time keeping other things equal, the strength of that connection is decreased.

Educational Implication : Educational Implications of the law of exercise is great. It lays importance on the value of repetition, drill and practice for memorizing and mastering of any learnt material. It emphasizes that there should not be a long gap between one practice and the next one because long time disuse may lead to forgetting. The teacher should therefore, make the students practice whatever has been taught. Frequent test should be taken to make the students practice the subject learnt. This law is very helpful in the teaching of mathematics, science etc.

iii) **Law of Effect :** Law of effect means that the learning takes place properly when it results in satisfaction and the learner derives pleasure out of it . On the other hand, if the learner faces failure or get dissatisfaction, the progress on the path of learning is hampered. For example: When a child solves questions correctly he feels encouraged to do more. But if he fails repeatedly, he is unwilling to make subsequent attempts.

This law is based on the feelings of the learner. Learning is stronger when joined with a pleasing or satisfying feeling. It is weakened when linked with an unpleasant feeling. An experience that produces feelings of defeat, anger, frustration, futility, or confusion in a student is unpleasant for him. This will decrease his learning capabilities. Therefore, instructors should be cautious about using punishment in the classroom. Every learning

experience does not have to be entirely successful, nor does the student have to master each lesson completely. However, every learning experience should contain elements that leave the student with some good feelings. A student's chance of success is definitely increased if the learning experience is a pleasant one.

Educational Implications : This law has great educational importance. The teacher can apply it in the classroom situation by introducing the principles of pleasure and pain, reward and punishment. When the student does something wrong and he is punished for it, he will not do the work again because punishment gives him pain. On the other hand, if the student is rewarded for his success or any good work, it gives him pleasure and he wants to repeat the work, making it permanent. Thus, the learner's feeling or emotional state affects learning.



CHECK YOUR PROGRESS

Q.2. What are Thorndike's three major laws of learning?

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Q.3. Say True or False :

I. Thorndike's laws of learning are not accepted in education.

II. There should not be long gap between one practice and another.

Q.4. Mention two sub parts of the law of exercise?

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