

Paper: 201 (M)

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Unit: II

Topic: Operant Conditioning theory of learning.

Operant Conditioning Theory: This method of Conditioning was developed by an American Psychologist B. F. Skinner. He was a practical Psychologist. He conducted several experiments on rats and pigeons. This theory is based on certain operations or actions which an organism has to carry out. In the process of operant Conditioning, operant responses are modified or changed by reinforcement. Reinforcement is a special aspect of conditioning within which the tendency for stimulus to evoke a response on subsequent occasion is increased by reduction of a need.

The S-R theorists have assumed that there has to be a stimulus as a prerequisite for evoking a response. But Skinner opposed this and argued that most of the responses could not be attributed to the known stimuli. He mentioned two types of responses - the first one is respondent behaviour which elicited from the known stimuli and other as operant behaviour, which elicited from unknown stimuli.

Skinner revolted against the no stimulus - no response mechanism in the evolution of behaviour. He argued that in practical life situation in our life, we cannot always wait for things to happen in the environment. Man is not a victim of the environment. Man may often manipulate the environment with his own initiative. Therefore, it is not always essential

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that there must be some known stimuli or cause for evoking a response. Quite often, most of our responses cannot be attributed to the known stimuli. The organism itself initiates the behavior. The environment is responding to the activity, rewarding or otherwise largely determines whether the behaviour will be repeated, maintained or avoided.

In short, Operant conditioning refers to a kind of learning process where a response is made more probable or more frequent by reinforcement. (The concept of reinforcement is identical to the presentation of a reward).
~~A reinforcer is the stimulus the presentation of removal of which increases the probability of a response being repeated.~~ Reinforcement helps in the learning of operant behaviour, the behaviour that is not necessarily associated with a known stimulus.

Implications/Usability of Skinner's Operant Conditioning in Education?

1) A response or behaviour is not necessarily dependent upon a specific known stimulus. It is more correct to think that a behaviour or response is dependent upon its consequences. Therefore, for training an organism to learn a particular behaviour or response, it may be initiated to respond in such a way as to produce the reinforcing stimulus. The

individual's behaviour should get the reward and he should in turn, act in such a way that he is rewarded again and so on.

Therefore, the learning or training process and environment must be so designed as to create the minimum frustration and the maximum satisfaction in a learner to provide him with proper reinforcement for desired training or learning.

2) The principle of operant conditioning may be successfully applied in behaviour modification. We have to find something which is rewarding for the individual whose behaviour we wish to modify, wait until the desired behaviour occurs, and immediately reward him when it does. When this is done, the frequency with which the desired response occurs goes up. When the behaviour next occurs, it is again rewarded, and the rate of response goes up even further. Proceeding in this manner, we can induce the individual to learn the desired behaviour.

3) The theory of operant conditioning does not attribute motivation to internal processes within the organism. It takes for granted the consequences of a behaviour or response as a source of motivation to further occurrence of ~~that~~ that behaviour. Verbal Praise, positive facial expressions of the trainer or teacher, a feeling

of success, high scores, good grades, medals and the opportunity to do work one likes are all good motivators. Operant Conditioning provided an external approach to motivation.

4) Operant Conditioning emphasizes the importance of Schedules in the process of reinforcement of behaviour. In trying to impart or teach a particular behaviour, great care should be taken for the proper planning of the Schedules of reinforcement.

5) This theory advocated the avoidance of Punishment for unlearning the undesirable behaviour and for shaping the desirable behaviour. Punishment proves ineffective in the long run. It appears that Punishment simply suppresses behaviour and when the threat of punishment is removed, the rate with which the behaviour occurs returns to its original level. Therefore, Operant Conditioning experiments suggested appropriate alternatives to Punishment, in the form of rewarding appropriate behaviour and ignoring inappropriate behaviour, for its gradual extinction.

6) In its most effective application, the theory of Operant Conditioning has contributed a lot to the

development of Teaching machines and programmed learning. The theory of Operant Conditioning has shown that learning proceeds most effectively if —

- a) the learning material is so designed that it produces fewer chances for failure and more opportunities for success.
- b) the learner is given rapid feedback concerning the accuracy of his learning, and
- c) the learner is able to learn at his own pace.

The principles originating from Operant Conditioning have revolutionized the training and learning programmes. As a result, mechanical learning in the form of Teaching machines and computer-assisted instructions have taken root in the place of usual classroom instruction.

[N.B. - Check the Skinner's experiments on rat & Pigeon. Which will help you learn more about this theory.]