Learning Theories

Self-Regulated Learing

Defined by: Barry Zimmerman

Sought to understand students that have trouble with learning and studying; wanted to provide help in developement

Main Idea: Process of altering behaviour by observing and imitating the behaviour of others; theory goes beyond mechanical responses to stimuli/reinforcement

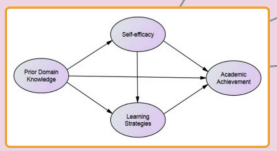
Structures and Functions:

General Principles: Not a mental ability or academic proformance, but rather a self-directed process were learners transform mental abilities into academic skill

1. Metacognition: Awareness of/knowledge about one's own thinking

2. Social Cognition: Social influences on children's development (of self-regulation)

3. Motivation: Depends on factors includeing precieved efficacy and natural interests; when learning a new skill, self-motivation lacks for beginners, however once results are seen this is greatly enhanced



Students who set specific goals display greater achievement and preceptions of self-efficacy

Self-awareness improves self-control and maintained motivation; awarness of strengths/limitations improves learning, goal setting and strategies

Includes key processes like:
- goal setting
- learning strategies
- self-attributions
- time management
- self-evaluation
- seeking help/information
- important self-motivational beliefs

Main Idea: Describes the process of taking control of and evaluating one's own learning and behavior

a) Forethought Phase =
This phase is the process and beliefs that occur before any academic efforts. Forethought includes task analysis (like goal setting and strategic planning), and self-motivation beliefs (like efficacy, outcome expectations, natural interest/value of a subject and learning goal orientation). Within this process one simply sets their goals, plans ahead for how they will achieve said goal, and keeps possible outcomes of what they are focusing on in mind.

b) Preformance Phase =
This phase is the process that occurs during the "behavioural implementation". The performance phase includes self-control (imagery, self-instruction, attention focus and task strategies) which refers to the initiation of specific methods of the task that were selected in the forethought phase, and self-observation (self-recording and self experimentation) which refers to being attentive to one's decisions and actions. The performance phase is essentially the process in which you undergo in order to complete your goal.

c) Self-Reflection Phase =
his phase is the process that occurs after the learning has been done. The self-reflection phase includes self-judgement (self-evaluation and causal attribution), which refers to the recognition and reaction to the successes and failures of the specific task and self-reaction (self-satisfaction, positive affect and adaptive/defensive responses) which refers to the encouragement or underminement of efforts and the responses to these efforts.

Sel-Regulation Info Video:
https://youtu.be/3OQsT7w6MBM

Social Learing

General Principles

1. Cognitive Learning: Focuses on how information is obtained and processed nad organized; concerned with mental processes

a) Cognitive Map = mental picture

b) Latent Learing = alternation of a behavioural tendency (not immediate/observable)

2. Modeling: Learning by imitating other; copying behaviour

a) Observational Learning = observer watches someone preform a behaviour and is later able to closely reproduce it

(bevahiour of others increases the chances that one will do the same thing)

b) Disinhibition = observer watches someone else engage in a threatening activity without being "punished", the observer may find it easier to engage in the same behaviour

3. Behaviour Modification: Refers to the systematic application of learning principles (classical/operant conditioning, social learning) to change people's actions and feelings

a) Computer Assisted Instruction

b) Self-control

c) Token Economies

Bandura and Social Learning Theory:
https://youtu.be/N(TxQy_U3ac
(relevant until 2:07)

Classical Conditioning

Classically conditioned responses can be extinguashed, this doesn't mean response is completely unlearned.

Spontaneous recovery = conditioned response can reappear

Processes are complimentary and are apart of everyday life; both may occur spontaneously in situations.

1. Acquistion = the process in which a conditioned response is established or strengthened (occurs gradually)

2. Generalization = occurs when the subject responses to a second stimulus that is similar to the original conditioned stimulus with the conditioned response without prior training (stimulus simply resembles the original in which the suject what trained with)

3. Discrimination = the ability to respond differently to different stimuli

4. Extinction = the gradual disappearance of a conditioned response when the conditioned stimulus is repeatly presented without the unconditioned stimulus

General Principles: A person or animal's old response becomes attached to a new stimulus

Main Idea: Learning theory that one can acquire certain behaviour through a learning process in which associatations are made between a neutral stimulus and an unconditioned stimulus

Neutral Stimulus: Stimuli that doesn't elicit any part of an unconditiond response

Unconditioned Stimulus: Stimuli (event/object) that elicits a certain predictable response without previous training

Unconditioned Response: An organism's automatic (or natural) reaction to stimulus

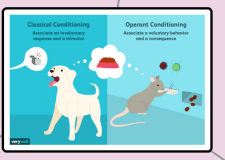
(Main Elements/Terms)

Conditioned Response: A response elicited by the conditioned stimulus's similar to the unconditioned response, but not an identical magnitude or amount.

Conditioned Stimulus: A once-neutral stimuli that elicits a given response after a given period of training in which it has been paired with unconditioned stimulus (to get a response)

Discovered the theory accidently as he was studying the processes of digestion

Developed by Ivan Pavlov (a Russian Physiologist)

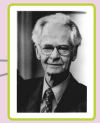


How to Train the Brain (Crash Course Video); Classical and Operant Conditioning Info:
https://youtu.be/aQ25wE_6uVM

Operant Conditioning

Developed by: B.F. Skinner

Was most closely associated with theory; believed that most behaviour is influenced by a person's history of history and punishment



Main Idea: Learning theory in which a certain action is reinforced or punished, resulting in corresponding increases or decreases in the likelihood that similar actions will occur again

3. Shaping: Technique in which the desired behaviour is "molded" by first rewarding any act similar to thoat behaviour and then requires closer approximations to the desired behaviour before giving a reward

General Principles: Learing from the consequences of behaviour; the learner will will repeat or eliminate behaviours to gain reward or avoid punishment

4. Learing Chains: Learned reactions that follow one another in sequence, each reaction producing a signal for the next

5. Aversive Control: Type of conditioning that influences behaviour by means of unpleasent stimuli

Punishment = an unpleasent consequence occurs and decreases the frequency of the behaviour that produced it

Negative Reinforement = a painful or unpleasent stimulus is removed; this increases the strength of a given response by prevention/removal

1. Reinforcement: Defined as a stimulus that increases the likelihood that the preceeding behaviour will be repeated

a) Positive Reinforcer = a stimulus that increases the likelihood that the response with occur again

b) Negative Reinforcer = increasing the strength of a given response by removing or preventing a stimulus when the response occurs.

c) Primary Reinforcer = satisfies a biological need (i.e. hunger, thirst, sleep); naturally rewarding

d) Secondary Reinforcer = stimulus thathas been paired with a primary reinforcer and (through classical conditioning) had aquired value (and the ability to reinforce)

2. Schedules of reinforcement: Important factor is timing and frequency of reinforcement

Fixed Ratio = reinforcement after a fixed amount of responses

Variable Ratio = reinforcement after varing number of responses

Fixed Interval = reinforcement of first response after a fixed amount of time has passed

Variable Interval = reinforcement of first response after varing amounts of time