Chapter 7
Behavior and Social Cognitive Approaches

What is Learning

o What Learning Is and Is Not

  • Learning - a relatively permanent influence on behavior, knowledge, and thinking skills that comes about through experiences

o Approaches to Learning

  • Behavioral - emphasis on experiences, especially reinforcement and punishment, as determinants of learning and behavior

  • Behaviorism - view that behavior should be explained by observable experiences

    • Mental processes

    • Associative Learning - learning that 2 events are connected (associated)

      o Occurs when a student connects a pleasant event with learning something in school

Cognitive

  • Social cognitive - emphasis on interaction of behavior, environment, and person (cognitive) factors as determinants of learning

  • Information processing - emphasis on how children process information through attention, memory, thinking, and other cognitive processes

  • Cognitive constructivist - emphasis on the child's cognitive construction of knowledge and understanding

  • Social constructivist - emphasis on collaboration with others to produce knowledge and understanding

<> Behavioral Approaches To Learning

o Classical Conditioning - a form of associative learning in which a neutral stimulus becomes associated with a meaningful stimulus and acquires the capacity to elicit a similar response. Ivan Pavlov (1849-1936) is the Russian physiologist who developed the concept of classical conditioning.

  • Generalization, distinction, and extinction

  • Systematic desensitization

  • Evaluating classical conditioning

Operant Conditioning - also called instrumental conditioning, this is a form of learning in which the consequences of behavior produce changes in the probability that the behavior will occur. Operant conditioning's main architect was B.F. Skinner, whose views built on the connectionist views of E.L.
Thorndike.

- Thorndike's Law of Effect - the principle that behaviors followed by positive outcomes are strengthened and that behaviors followed by negative outcomes are weakened

- Skinner's operant conditioning
  - Reinforcement and Punishment
    - Reinforcement (reward) - a consequence that increases the probability that behavior will occur
    - Punishment - a consequence that decreases the probability that the behavior will occur
      - If you frown at a student for talking in class and the student's talking decreases, your frown is said to punish the student's talking.

- Generalization, distinction, and extinction

Behavior Analysis in Education

- What is Applied Behavior Analysis?
  - Applied behavior analysis - application of the principles of operant conditioning to change human behavior

- Increasing Desirable Behaviors
  - Choose effective reinforcers
    - Premack principle - the principle that a high-probability activity can serve as a reinforcer for a low-probability activity
      - The Premack principle is at work when a teacher might tell the class, "If all of the class gets their homework done by Friday, we will take a field trip next week."
  - Make the reinforcer contingent and timely
  - Select the best schedule of reinforcement
  - Consider contracting
  - Use negative reinforcement effectively
  - Using prompts and shaping

- Decreasing Undesirable Behaviors
  - Use differential reinforcement
  - Terminate reinforcement (extinction)
  - Remove desirable stimuli
  - Present aversive stimuli (punishment)
Evaluating Operant Conditioning and Applied Behavior Analysis Social Cognitive Approaches to Learning

Bandura's Social Cognitive Theory

- Social cognitive theory - Bandura's theory that social and cognitive factors, as well as behavior, play an important role in learning
- Albert Bandura is one of the main architects of social cognitive theory. He says that when students learn, they can cognitively represent or transform their experiences. Recall in operant conditioning, connections occur only between environmental experiences and behavior.
- Bandura developed a reciprocal determinism model that consists of 3 main factors:
  - Behavior
  - Person/cognitive
  - Environment
- Self-efficacy - the belief that one can master a situation and produce positive outcomes

Observational Learning - also called imitation or modeling, the learning process in which a person observes and imitates someone else's behavior

- The Classic Bobo Doll Study - an experiment by Bandura (1965) illustrated how observational learning can occur even by watching a model who is not reinforced or punished
- Bandura's contemporary model of observational learning
  - Attention
  - Retention
  - Production
  - Motivation

Cognitive Behavior Approaches and Self-Regulation

- Cognitive behavior approaches - changing behaviors by getting people to monitor, manage, and regulate their own behavior rather than letting it be controlled by external factors
  - Self instructional methods - cognitive behavior techniques aimed at teaching individuals to modify their own behavior
- Self-regulatory learning - the self-generation and self-monitoring of thoughts, feelings, and behaviors in order to reach a goal

Evaluating the Social Cognitive Approaches
CHAPTER 8

THE NATURE OF THE INFORMATION PROCESSING APPROACH

INFORMATION, MEMORY AND THINKING

DEFINITION: A cognitive approach in which children manipulate information, monitor it, and strategize about it. Central to this approach are the cognitive processes of memory and thinking.

SEIGLERS VIEW

Robert Seigler described 3 main characteristics of the information processing approach: THINKING, CHANGE MECHANISMS, AND SELF MODIFICATION.

Thinking according to Seigler is highly flexible which allows individuals to adapt and adjust too many changes and circumstances task requirements and goals.

Seigler believes 4 main mechanisms work together to create changes in children's cognitive skills: ENCODING, AUTOMATIZATION, STRATEGY CONSTRUCTION AND GENERALIZATION.

Serf modification is that children use knowledge and strategies that they have learned in previous circumstances to adapt to their responses to a new learning situation.

MEMORY

DEFINITION: The retention of information over time which involves encoding, storage and retrieval.

-ENCODING: Getting the information into the memory. Chunking is a form encoding. It involves grouping or packing information into higher-order units that can be remembered as single units.

-STORAGE: Retaining information over time. Short-term memory is a limited-capacity memory system in which information is retained for as long as thirty seconds unless the information is rehearsed in which case it can be retained longer.

-RETRIEVAL AND FORGETTING. Taking information out of storage.

To retrieve something from our mental "data Bank" we search our store of memory to find
Cue-dependent forgetting: Retrieval failure caused by a lack of effective retrieval cues.

**EXPERTISE**

--- **EXPERTISE AND LEARNING**

*Studying the* behavior and menial processes of experts *can* give us insights about how to guide students into becoming more effective learners. How do experts differ from beginners.

1. They notice features and meaningful patterns of information that beginners don't.
2. They have acquired a great deal of content knowledge that is organized in a manner that reflects a deep understanding of the subject.
3. They can retrieve important aspects of their knowledge with little effort.
4. They are adaptive in their approach to new situations.
5. They us effective strategies.

--- **ACQUIRING EXPERTISE**

This is accomplished by:

- **Practice and motivation:** one view of expertise is that deliberate practice is required to become an expert.
- **Talent:** A number of psychologists who study expertise believe it not only requires deliberate practice and motivation, but also talent.

--- **EXPERTISE AND TEACHING**

Being an expert in a particular domain does not mean that the expert is good at helping others learn it.

Expertise can sometimes interfere with good teaching, because many experts don't adequately consider what is easy and what is difficult for the students.

--- **METACOGNITION**

Cognition about cognition, and knowing about knowing.
Metacognition involves both metacognitive knowledge and metacognitive activity.

Metacognitive knowledge involves monitoring and reflecting on one’s current or recent thoughts.

-DEVELOPMENTAL CHANGES

Many metacognitive studies have focused on metamemory or what students know about how memory works. Children’s metamemory improves through the elementary school years.

-THE GOOD INFORMATION-PROCESSING MODEL

The model emphasizes that competent cognition results from a number of interacting factors. The include Strategies, Content Knowledge, Motivation and Metacognition.

1. Children are taught by parents or teachers to use a particular strategy with practice they learn about its characteristics and advantages for learning specific knowledge.

2. Teachers demonstrate similarities and differences in multiple strategies in a particular domain which motivates students to see shared features of different strategies this leads to better relational knowledge.

3. At this point students recognize the general benefits of using strategies which produces general strategy knowledge.

STRATEGIES AND METACOGNITIVE REGULATION

The key to education is helping students learn a rich repertoire of strategies that result in solutions into problems. Most children benefit from using multiple strategies and exploring which ones work well when and where.

Play ball!!!!!!!!!!!!!