Learning, a process central to human behavior,

- has been of interest to philosophers, psychologists, educators, and politicians for centuries.

- Since the late nineteenth century, the systematic investigation of this phenomenon has resulted in many explanations of how people learn.

Plato and Aristotle

- Learning, so central to human behavior yet so elusive to understanding, has fascinated thinkers as far back as Plato and Aristotle.

- The views of these two philosophers underpin much modern research on learning conducted by psychologists and educators.
Learning originally was within the purview of philosophical investigations

- The philosophers were interested in looking into the nature of knowledge, the human mind, and what it means to know.
- Plato believed that the physical objects in our everyday world have corresponding abstract forms that we can come to know through "introspection or self-analysis. . . .
- Only by turning away from the physical impure world to the world of ideas, pondered by the mind's eye, can we hope to gain true knowledge.

In contrast, Aristotle believed

- that all knowledge comes through the senses; these sense impressions can be pondered "to discover the lawfulness that runs through them".

- Plato's "rationalism" can be seen in Gestalt and cognitive psychology.
- Aristotle's "empiricism" is particularly evident in early behavioral psychology.
- Later philosophers presented variations on these two basic positions, ranging from Descartes' separation of mind and body to Kant's notion of innate mental faculties.
There are Dozens of Learning Theories

- Behaviorist
- Humanist
- Cognitivist
- Social cognitive
- Constructivist

The Behaviorists

- They define learning as a change in behavior.
- The focus of their research is overt behavior, which is a measurable response to stimuli in the environment.
- The role of the teacher is to arrange the contingencies of reinforcement in the learning environment so that the desired behavior will occur.
- Findings from behavioral learning theories can be seen in training and vocational adult education.

Behaviorism

- An approach in psychology which attempts to explain all behavior in terms of learning.
- This reductionist approach largely focuses on overt behavior and ignores internal mechanisms such as cognitions (e.g. thoughts).
Behaviorists believe that human beings are shaped through constant interactions with the environment.

- B.F. Skinner’s work on operant conditioning is still very influential today.
  - He conditioned rats to press a bar in a ‘Skinner box’ in return for a reward of food and even taught pigeons to play ping pong.

Operant Conditioning

- Reinforcement and punishment are the core tools of operant conditioning.
- They are either positive (delivered following a response), or negative (withdrawn following a response).
- This creates a total of four basic consequences, with the addition of a fifth procedure known as extinction (i.e. no change in consequences following a response).

- Reinforcement is a consequence that causes a behavior to occur with greater frequency.
- Punishment is a consequence that causes a behavior to occur with less frequency.
- Extinction is the lack of any consequence following a response. When a response is inconsequential, producing neither favorable nor unfavorable consequences, it will occur with less frequency.
Behavioral Perspective

- Applied behavior analysis, a set of techniques based on the behavioral principles of operant conditioning, is effective in a range of educational settings.
- Teachers can improve student behavior by systematically rewarding students who follow classroom rules with praise, stars, or tokens exchangeable for sundry items.

Instructional design

- The systematic design of materials, activities and interactive environments for learning is broadly informed by educational psychology theories and research.
  - Defining learning goals or objectives, use of a taxonomy of educational objectives, and task analysis.
  - Benjamin Bloom researched mastery learning, an instructional strategy in which learners only advance to a new learning objective after they have mastered its prerequisite objectives.
  - Bloom discovered that a combination of mastery learning with one-to-one tutoring is highly effective, producing learning outcomes far exceeding those normally achieved in classroom instruction.

The Humanistic Orientation to Learning

- The emphasis is on human nature, human potential, human emotions, and affect.
- Theorists in this tradition believe that learning involves more than cognitive processes and overt behavior. It is a function of motivation and involves choice and responsibility.
- Much of adult learning theory, especially the concepts of andragogy and many of the models of self-directed learning, are grounded in humanistic assumptions.
Some Humanistic Ideas

- Free Inquiry
- Separation Of Church And State
- The Ideal Of Freedom
- Ethics Based On Critical Intelligence
- Moral Education
- Religious Skepticism
- Reason
- Science And Technology
- Evolution
- Education

The Cognitivist

- They focus not on external behavior but on internal mental processes.
- They are interested in how the mind makes sense out of stimuli in the environment — how information is processed, stored, and retrieved.
- This orientation is especially evident in the study of adult learning from a developmental perspective.
  - The major concerns are how aging affects an adult’s ability to process and retrieve information and how it affects an adult’s internal mental structures.

Cognitivism

- The cognitivist school “went inside the head of the learner” so to speak in that they made mental processes the primary object of study and tried to discover and model the mental processes on the part of the learner during the learning-process.
- The cognitivist paradigm essentially argues that the “black box” of the mind should be opened and understood. The learner is viewed as an information processor (like a computer).
Social Cognitive Learning

- Its focus is on the social setting in which learning occurs.
- They believe learning occurs through the observation of people in one's immediate environment.
- Learning is a function of the interaction of the person, the environment, and the behavior.
- Variations in behavior under the same circumstances can be explained by idiosyncratic personality traits and their unique interaction with environmental stimuli.

Social Learning Theory posits that people learn from one another, via observation, imitation, and modeling.
- The theory has often been called a bridge between behaviorist and cognitive learning theories because it encompasses attention, memory, and motivation.
- Social learning theories contribute to adult learning by highlighting the importance of social context and explicating the processes of modeling and mentoring.

Constructivism

- They believe that learners construct their own knowledge from their experiences.
- The cognitive process of meaning-making is emphasized as both an individual mental activity and a socially interactive interchange.
- Aspects of constructivism can be found in self-directed learning, transformational learning, experiential learning, situated cognition, and reflective practice.
Constructivists

- They posit that learning is an active, constructive process.
- The learner is an information constructor.
- People actively construct or create their own subjective representations of objective reality.
- New information is linked to prior knowledge, thus mental representations are subjective.

Assignment

- Read Chapter 12
- Do Annotation for Chapter 12 and send it in.
- Learning Activity 8 Due Nov 19

Let's Go Home November 11, Veteran's Day!