Summary of 5 Principles of Instruction

The 5 Principles of Instruction serve as a foundation, upon which effective instruction is built. These principles are interconnected and supportive of one another in a way that enhances the efficacy of instruction through the activation of learner-centric ideals and methodologies. While they are most effective when they are all incorporated into a learning environment, the presence of all 5 Principles of Instruction is not required to facilitate learning (Merrill, 2001). However, it is theorized that without the implementation of at least one principle during instruction, the instruction will result in a decrement of learning and performance (Merrill, 2001). Ultimately, incorporation of the 5 Principles of Instruction during the instructional design process results in a more effective and enriching learning environment. According to the 5 Principles of Instruction, learning is facilitated when:

Learners are Engaged in Solving Real-Life Problems

Efforts in the field of cognitive psychology indicate that individual levels of learning are increased when they are engaged in problem solving. Further, when learners are able to associate problems with actual life situations and scenarios that they have experienced, or hold a probability of encountering in the future, the learning experience is more effective (Merrill, 2001). Ultimately, learners benefit from the understanding that the learning taking place can be used to assist them in the navigation of actual problems in life.

Existing Knowledge is Activated as a Foundation to New Knowledge

Individuals learn best when the learning environment allows the learner to utilize previously acquired knowledge as the foundation for new learning. When learners activate previous knowledge that is appropriately aligned with the desired new knowledge, learners are able to associate ideas, methods, perspectives, and theories in a more efficient and effective way (Merrill, 2001). In summary, a student's level of comfort with new information, based on previous knowledge, enhances the levels of acceptance and understanding of the new instruction.

New Knowledge is Demonstrated to the Learner

Specific and detailed instruction that is demonstrated to the learner is more beneficial than generalized instruction that is provided in lecture, reading, or self-study formats. Further, demonstration must be properly aligned with the goal of the instruction and should include the provision of examples and non-examples of concepts and the elements of procedural demonstration, visualization, and modeling (Merrill, 2001).

When New Knowledge is Applied by the Learner

The application of newly acquired knowledge, primarily during problem solving, serves to validate and solidify knowledge within the learner. Further, it is imperative that learners receive constructive feedback during and after application practices to enhance and refine newly acquired knowledge (Merrill, 2001). It is during the application process, through practice, that new knowledge becomes existing knowledge upon which further learning can occur.

When New Knowledge is Integrated into the Learner's World

Learning is further facilitated when the acquired knowledge is integrated into a learner's normal life experiences. This learning is enhanced through public demonstration of the new knowledge within the learner's normal environment (Merrill, 2001). Moreover, the repetitive use of new knowledge, by the learner, in everyday dealings, increases the level of importance of the knowledge to the learner (Merrill, 2001). The expression "if you don't use it, you'll lose it" is a good example of this principle, as learners tend to divest knowledge that is not often activated more frequently than knowledge that is regularly retrieved.

Definition of Learning Theory

Learning theories describe how one learns and provide the information required to design and construct effective instruction. However, learning theories are not utilized within a classroom environment (Ormrod, 2020). Ultimately, learning theories are used to describe the results of learning and the mechanisms of learning, which allow instructional designers to properly create instruction based on the associated learning theory.

Definition of Instructional Design Theory

Instructional design theories, unlike learning theories, are prescriptive in nature. They are utilized to design instruction, facilitation of learning, learning experiences, and learning environments (Ormrod, 2020). In summary, instructional design theories are a compilation of declarations used to prescribe the ends, ways, and means we utilize to design, develop, and implement instruction, which effectively facilitate learning in an instructional environment.

Definition of Learning According to Behaviorism

According to behaviorism, learning is a relatively permanent change in observable behavior as a result of experience. Organisms learn through experiences, which adjust the organism's responses to various stimuli. Behaviorists maintain that these responses must be observable, and therefore exclude internal processes, such as thinking, from behaviorist studies. Further, behaviorists believe that all organisms learn and acquire knowledge in the same way, allowing for the findings of studied behaviors of non-human organisms to be applied to human learning situations (Koszalka, 2019). Succinctly, all organisms learn to respond or behave according to presented stimuli and reinforced responses to those stimuli.

Definition of Learning According to Cognitivism

According to cognitivism, learning is a relatively permanent change in mental representations or associations due to experience. Mental representations, or schemas, are formed and serve as the basis for knowledge within human beings. Schemas are altered and adjusted with newly acquired information through the processes of assimilation and accommodation where learners assimilate new information to existing information within the schema or accommodate by adjusting previous schema knowledge to ensure compatibility with new knowledge (Koszalka, 2019). Contrary to behaviorism, cognitivism posits that some learning processes are unique to humans and that learning does not have to be observed.

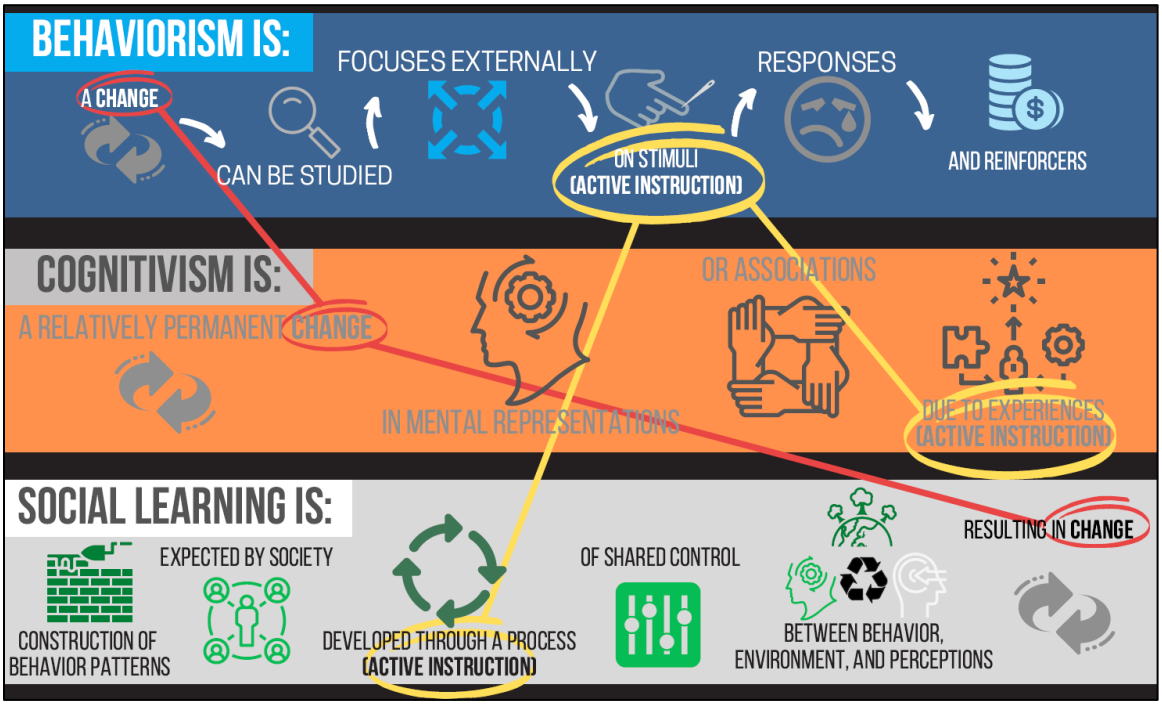
Definition of Learning According to Social Learning

According to social learning theory, learning is a construction of behavior patterns, expected by one's society. Further, learning is developed through a process of shared control, or reciprocal causation, between behaviors, environments, and internal processes that influence perceptions (Koszalka, 2019). Further, social learning theory indicates that learning processes extend to factors beyond the individual learner and that environmental interactions are critical to learning and the construction of knowledge (Ormrod, 2020). Ultimately, social learning theory states that individuals learn from environmental observations to construct knowledge.

Theory Incompatibility

While all three learning theories contain similarities regarding learning as a process of change and the requirement of active instruction in learning, they also reject one another in certain aspects. Behaviorism rejects cognitivist and social learning thought regarding the observable nature of learning. Social learning theory possesses ideas that knowledge construction is rooted in philosophical foundations while cognitivist thought posits that learning is a change in mental representations. Since neither of these thoughts result in observable action, behaviorist thought processes discard these portions of the theories (Koszalka, 2019).

Further, cognitivism rejects behaviorism due to the perspective that learning occurs through the relationship between stimulus and response. Since neither behaviorism, nor social learning theory indicates that learning is a result of a change in mental representation, they are both rejected on these grounds by cognitivist thought. Conversely, social learning theory's ideas regarding the use of philosophical foundations in the process of learning and the construction of knowledge, as opposed to the acquisition of knowledge, cause a rejection to both behaviorist and cognitivist thoughts and perspectives (Koszalka, 2019).



Writer's Favorite Theory

In the opinion of this writer, social learning theory stands out as the most comprehensive, relevant, and sensible theory amongst the three studied. Social learning theory provides ideas that are observable and rational within human society as one can nearly always associate a learning experience with an example taken from a societal environment. Further, this writer believes that we, as humans, are born with a specific set of innate instincts that ensure our survival as infants. We instinctually root for a food source when held close to an adult's torso, we startle at loud or unpleasant stimuli, and we alert during periods of discomfort that could pose a risk to our survival. Aside from these innate responses, the remainder of our learning can be attributed to observation of our surroundings and imitations of actions that occur within it.

Further, the innate instinctual responses of the previously mentioned infant tend to shift and become more relevant as we develop. A newborn will root for a food source when close to any adult's chest, but a 6-month old infant will only do so with a female adult, and then as development progresses, only with the infant's mother. As we develop, we observe which actions are rewarded, which are not, and how to differentiate between them. Our alert responses decrease as we age, as we observe others in our environment and begin to discern what actually poses a threat from does not, according to societal responses within the environment.

In summary, the concepts, ideas, theories, thoughts, and methods involved in social learning theory seem to present the best and most appropriate answer to what learning actually is, a question that still eludes those whom study learning. While social learning theory holds its own distinct properties, aside from behaviorism and cognitivism, and rejects the ideas that knowledge is acquired as opposed to constructed, it simultaneously concedes that behavior and cognition play a role in learning. Social learning is not derived from a combining of cognitive and behaviorist thought, but instead implies that thinking about the observations we make within society serves as the main mechanism for learning.

Writer's Perspectives on Other Theories

Behaviorism

While behaviorism holds scientific evidence extrapolated from centuries of study, it falls short regarding the role of internal processes in learning. Further, to propose that all organisms learn in the same way seems, to this writer, to be a bit generalized. While all organisms may learn, it is difficult to accept that lesser evolved organisms possess the same capacity to learn as the higher evolved. Lastly, as a student and life-long learner, this writer does not agree that all learning must be observable. Behaviorism is limited in that it maintains that the results of learning must be visible during experimentation, ultimately disregarding the cognitive processes involved in learning and knowledge acquisition and construction.

Cognitivism

Cognitivism falls a close second to social learning theory regarding the opinions of this writer in that the cognitive processes involved in learning are vital and should always be considered in learning environments. Further, cognitive processes differ amongst learners and

present challenges that must be considered during the instructional design process. Conversely, cognitivism does not quite afford the same holistic understanding of the processes of learning as social learning theory provides, in the opinion of this writer.

In referencing the aforementioned example of newborn infants, one is born with some semblance of instinctual knowledge focused on survival; however, the evolution of that knowledge is easier explained by the construction of knowledge to compliment it rather than the acquisition of further knowledge to support it. In summary, this writer asserts that as we construct knowledge, through behavioral patterns created from societal expectations, we connect that knowledge to other pieces of knowledge that may compliment it in varying degrees. This writer finds it difficult to accept that our knowledge exists within our minds in proper rows and sections, which we may add to over time, as opposed to one large and interconnected network of knowledge where each piece of knowledge supports the next.

Summary

Prior to this writer's participation in this course, the intricacies and processes involved with learning were of little consequence. This course has served to expand this writer's perspectives in ways that will surely attribute to the development of more effective learning environments, of which this writer is a member of, in the future. The understanding and knowledge constructed by this writer throughout this course is enlightening, but also frustrating from the standpoint of a desire to have had this knowledge throughout this writer's lifetime of educational experience. The struggles and challenges faced by this writer may have been abated with this knowledge, the deeper understanding of what learning is, and how it is conducted.

This writer finds solace in the fact that the learning theories and their associated instructional design theories will be of great value in the future. An understanding and appreciation for the works of Pavlov, Skinner, Piaget, Vygotsky, Rotter, Bandura, and the countless other contributors to the science of learning cannot be underestimated or overvalued. As an educational professional, it this writer's hope to utilize this knowledge to impact education and learning experiences, in a positive way, for years to come. While behaviorism, cognitivism, and social learning theory are presented, throughout this course, as distinct and separate theories, this writer now understands how they work together to support and expand the learning environment for the benefit of learners.

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