LEARNING THEORIES: BEHAVIORISM, COGNITIVISM, CONSTRUCTIVISM

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ABSTRACT

The purpose of this paper is to analyze how three different learning; behaviorism, cognitivism and constructivism guide the process of learning. The aim of these learning theories is to give an understanding of how learners are trained to respond to stimuli. Here the mind is a ‘black box’ is completely irrelevant. Hence, this learning theory takes into account classical and operant conditioning to comprehend the behaviorist approach.

Bouton (1994) explained that in Pavlov’s classical conditioning, a stimulus that helps in signaling a biologically important event loses its capability to evoke a response from a learner when it is presented, without that event. Skinner (1963) mentioned that the study of operant behavior clarifies the nature of the interrelationship between behavior of an individual and its consequences. The work of Skinner made a way for operant conditioning as he believed that classical conditioning is too simple to be considered as a full explanation of complex human behavior. He suggested that the best way to understand human behavior is to analyze the causes of a human’s action and its consequences.

My goal in this paper is to discuss important theories of learning that are relevant to educators. Different learning theories have emerged by academic scholars as they have focused on different types of learning. Some researchers have focused on learning with understanding where as others have focused on acquisition of skills of learners. Some are also studying and exploring the emergence of unique ideas through social interaction. I will also be discussing a concept map I made of learning theories and connections between the various elements depicted in that map. McClure, Sonak & Suen (1999) stated that concept map potentially is used as a learning strategy for learners and simultaneously is a means to assess learner’s understanding towards any given concepts. Concept maps are considered to be a valuable source of information about the content of learner’s knowledge. McClure et al. (1999) identified that extracting information by learners to organize their knowledge in a form of concept map is a time-consuming analysis but it helps in assessing idiographic nature of learner’s structures of knowledge.

I will be displaying components in this concept map in a hierarchical pattern with the very general and inclusive concepts at the upper part of the map and the concepts which are specific in nature, will be displayed below in the hierarchy. Noval & Canas (2008) explained that the classified or hierarchical fashion for any particular domain of information mainly depends on the framework in which that information in being considered and applied by a learner. Therefore, it is always best to have a focus question which in my case is learning theories and their links with different elements. You will also see cross-links in the concept map of learning theories. Cross-links will help us in understanding that a concept in one domain of information seen on the below concept map can be seen related to a concept in a new domain. Noval & Canas (2008) posited that cross-links help in representing creative leaps for the learner as well in the process of creating new knowledge.

LEARNING THEORIES:
Plato and Socrates reminded us long time back that learners are neither blank states nor passive observers, in fact they are active constructors of information and meanings. Understanding the concepts of learning theories are highly important as they are considered as the foundation of learning. Accordingly, these learning theories have significant differences in terms of perspectives on learning. Theories help in distinguishing different ways of learning and recognizing that some learners tend to learn in ways different from ours.

BEHAVIORISM:
Learners are directed to listen attentively when educators are teaching. According to (Suzanne & Peterson, 2006), the assumption has been made that if learners are motivated and educators communicate their messages clearly, learning will occur. Logic goes ‘apparently’ that if learners do no learn, it could be owing to two factors; either they were not paying attention or they don’t seem to care at all. These ideas are the basis of a learning theory that focused on behavior. Suzanne & Peterson (2006) stated that behavioral learning theory is centered on the belief that one behavior of an individual leads to another. Zhuo & Brown (2014) stated that Watson and Skinner are the originators of behavior learning theory. Watson believed on the idea that human behavior results from specific stimuli that helps in generating certain responses. He further suggested that inferences regarding human development should be made based on observation of overt behavior and not based on subconscious motives. Zhuo & Brown (2014) elaborated that idea of conditioning is central to behaviorism which explains that individuals are trained to respond to stimuli. Here the mind is a ‘black box’ is completely irrelevant. Hence, this learning theory takes into account classical and operant conditioning to comprehend the behaviorist approach.

Bouton (1994) explained that in Pavlov’s classical conditioning, a stimulus that helps in signaling a biologically important event loses its capability to evoke a response from a learner when it is presented, without that event. Skinner (1963) mentioned that the study of operant behavior clarifies the nature of the interrelationship between behavior of an individual and its consequences. The work of Skinner made a way for operant conditioning as he believed that classical conditioning is too simple to be considered as a full explanation of complex human behavior. He suggested that the best way to understand human behavior is to analyze the causes of a human’s action and its consequences.

Skinner’s research found out that satisfying responses of individuals are conditioned whereas on the contrary, unsatisfying responses are not conditioned. Operant conditioning involves changing of individual’s behavior by using reinforcement which is given after the desired behavior. Learners will repeat the desired behavior if there is a positive reinforcement. Positive reinforcement, in operant conditioning, may include verbal reinforcement or tangible rewards. In contrast, negative reinforcement can also play a vital role in strengthening one’s behavior. Punishment, however, can weaken a behavior because of the negative condition being experienced as a result of the behavior and guides the individual not to repeat it again. Burns (1995) Burns (1995) suggested that punishment can help in creating a set of conditions designed to eliminate unacceptable behavior.

We need to understand the fact that positive and negative reinforcement techniques are used in our daily lives and our workplaces too. Many organizations use positive reinforcement technique to offer raise to their employees who exhibit outstanding performance every year. An increase in the salaries serves as a motivation for employees to do their respective jobs in the most efficient manner. Negative reinforcement can also be seen implemented in different ways in our lives. Using cell phone while driving, in Dubai, can result in a hefty fine including four black points. Also, academically in many higher education institutes, there is a 5% deduction from the total score per day if the students do not submit their essays or assignment on time. Verbal reinforcement, a practice mostly commonly used, can also be considered as an example of behaviorist learning theory. Moreover, bonus points or participation points come also under the category of behaviorist learning theory. The change in behavior of a learner mainly signifies that there has been an effective learning. Being an educator, I feel that this reward or punishment method is usually used to encourage or discourage the behavior of a learner.

COGNITIVE APPROACH:
Suzanne & Peterson (2006) mentioned that behavioral theorists has contributed in making a way for cognitive theory which involved placing the mind again into the equation of learning. In this theory, focus was put on the internal thought processes of a learner and not just solely on the observable behaviors. This theory can be divided into two learning theories; social cognitive theory and cognitive behavioral theory. Hence, the theory of cognitive learning has also been built on the principles of behavioral learning theory.

Zhou & Brown (2014) explained that social cognitive theory has been initially developed with a major emphasis on learner’s acquisition of social behavior by Bandura, advocate of this theory. Social cognitive theory, however, continues to emphasize on the fact that learning in a learner tends to occur in a social context.
and that learning is mainly gained from observation. Social cognitive theory, according to, (Bandura, 1999) has been applied to many diverse areas of learner functioning such as professional choices or physical and mental health. Moreover, it has also been applied extensively by educators while understanding motivation factors in classroom and also applied by learners while learning and achieving their desired goal. Zimmerman (1998) mentioned that learners can be described as self-regulated to a degree that they have motivationally, meta-cognitively and lastly, behaviorally active applicants when it comes to their own learning process. Zimmerman (1989) talked about the triadic reciprocity, one assumption, which is the reciprocal causation in three influential processes, which is made in personal, behavioural and environmental determinants in a self-regulated learning environment. These three factors can influence each other in a bidirectional and reciprocal manner. This means that a learner’s on-going learning process is a combination of continuous interaction between contextual, cognitive and behavioral elements. For instance, learning in a classroom is influenced and shaped by many factors in that academic environment, especially when it comes to reinforce experiences experienced by learners from educators or others. Simultaneously, learning can be affected by thoughts of learners themselves and self-beliefs along with their interpretation of that academic environment context. Alongside, second assumption is that the internal factors such as thought, self-reflection and existing beliefs exert substantial influence over learner’s outcome more broadly. Lastly, a third assumption is that learning in a learner can sometimes occur with- out an immediate reflective change in behavior. In other words, learning and the development of behavior in a learner are two distinct processes. The main reason behind the separation is that social learning theory not only involves the acquisition of new behavior in a learner but also involves cognitive skills, concepts, values and knowledge as well.

Salkovskis (1985) explained that in cognitive behavioral learning theory, a detailed study by researchers on cognitive and behavioral models leads to the idea that intrusive thoughts in a learner are best regarded as cognitive stimuli instead of responses. Cognitive responses can be linked to beliefs like blaming yourself for causing any harm or others. The role of cognition in this theory is to determine and predict the behavioral pattern of a learner. This theory implies that learners tend to form self-concepts that affects their behavior they display to others. These concepts, either negative or positive, can be highly affected by a learner’s environment they live in. Hence, learning is not merely about the change in learner’s behavior; it is about change of knowledge which is stored in learner’s long-term memory. Providing imageries is also one of the examples of cognitive learning theory. Imageries are used quite often in the lecture slides to entertain learners and give a clear picture of what is being taught sometimes.

CONSTRUCTIVISM:
According to (Mergel, 1998), behaviorism and constructivism are mainly objective in nature. Constructivism helps in promoting a more open-ended learning involvement where the outcomes as well as methods cannot be easily measured and may not be the same for every learner. Behaviorism and constructivism analyzes a task and break it down into manageable small portions to establish objectives and measure performance based on those objectives. Process of learning in this theory is considered to be non-linear and complex in nature. Constructivism theory is based on scientific study and observation about how learners learn. It takes into account previous experiences and ideas of learners to reconcile with any new information to find out if it changed what learners already believed in or discarding the new information is what learners must do. Learners must be actively involved in a process of asking questions, exploring and assessing what they already know.

Hein (1991) mentioned that John Dewey has expressed the core ideas in this learning theory and there can be seen a common acceptance of this old set of thoughts and ideas. Hein (1991), while discussing some principles of constructivism learning theory, explained that learning cannot be considered as the passive receiving of information which prevails everywhere mostly but instead, learning asks learner to engage with the world to derive meanings out of it. Furthermore, learning has two components; constructing systems of meaning and secondly, constructing meaning. For instance, if learners understand the chronological order of events experienced by them, they are also learning the gist of the word ‘chronology’. Each meaning a learner forms makes them better able to attach understanding to other sensations which tends to fit a similar form.

Another principle discussed by Hein (1991), is that physical actions may be essential for learning in some cases. For instance, for children, educators provide activities to engage their minds as well as the hands to learn in a more effective manner. This activity has been named as a reflective activity by Dewey. Moreover, learning also uses the language. Research has also observed that learners talk to themselves while they learn. Language and learning are mainly intertwined most of the times in the process of learning.

Learning is widely considered as a social activity. In social constructivism learning theory, social aspect of learning i.e. interaction with others is an integral aspect of learning. According to (Palincsar, 1998), social constructivist focuses on the idea that there is an interdependence of individual and social processes in the co-construction of information. Learning can also be considered as contextu-