

Pedagogical implications of the constructivist and behaviourist theories in the school environment. The school motivation and the teaching practice

Autor: Guerrero Puerta, Laura M (Maestro en Educación Infantil. Master Orientación Educativa. Ugr).

Público: Profesores, estudiantes universitarios, magisterio, pedagogía. **Materia:** Pedagogía y Psicología de la educación. **Idioma:** Inglés.

Title: Pedagogical implications of the constructivist and behaviourist theories in the school environment. The school motivation and the teaching practice.

Abstract

Much has been written about the process of motivation in the school environment and the development of teaching practice. In this area, two of the main theoretical perspectives are behaviourism and constructivism. Next, the two theories will be compared and contrasted, focusing on their pedagogical implications in the school setting. For this, first each of them will be described, then the main differences and similarities between them and their involvement in education will be explored and finally a conclusion of the main findings will be made.

Keywords: Teaching practice, Pedagogy, Educational Psychology, Education Theory, Constructivism, Behaviourism

Título: Implicaciones pedagógicas de las teorías constructivistas y behavioristas en el ámbito escolar. El proceso de motivación escolar y la práctica docente.

Resumen

Mucho se ha escrito sobre el proceso de motivación en el ámbito escolar y el desarrollo de la práctica docente. En este ámbito dos de las principales corrientes teóricas son el behaviorismo y el constructivismo. A continuación, se compararán y contrastarán ambas teorías, centrándonos en sus implicaciones pedagógicas en el ámbito escolar. Para ello, primero se describirán cada una de ellas, luego se explorarán las principales diferencias y similitudes entre ellas y su implicación en la educación y finalmente se hará una conclusión de los principales hallazgos.

Palabras clave: Práctica docente, pedagogía, psicología de la educación, teoría de la educación, constructivismo, behaviouralismo.

Recibido 2017-11-20; Aceptado 2017-12-13; Publicado 2017-12-25; Código PD: 090085

INTRODUCTION

The theories of learning that will be discussed in this paper are Behaviourism and Constructivism. Behaviourists think that "only observable, measurable, outward behaviour is worthy of scientific inquiry" (Bush, 2006). Hence, they were focus on learning process as affected by changes in behaviour. They concluded that by given the right environmental influences all learners acquire the same understanding and every student can learn. Skinner and Watson, the two major researchers of the behaviourist school of thought that behaviour could be predicted and controlled (Skinner, 1974). They studied how learning is affected by changes in the environment. In contrast to those beliefs, the constructivists viewed learning as a search for meaning. They think that knowledge is constructed by the learner and that the learner develops her/his own understanding through experience. Piaget and Vygotsky described elements that helped predict what children understand at different stages (Rummel, 2008).As can be seen details of both theories can give an idea of the differences and connections between the behaviourist and constructivist theories in relation to how children learn and how their behaviour is determined.

Below will be compare and contrast both theories, for that, firstly will be describe each of them, then will be explore the main differences and similitude between those and their implication in education and finally will be make a conclusion of the main findings.

DESCRIPTION

The term behaviourism was first said by the famous psychologist John B. Watson (1913), referred to the belief that behaviours can be measured, trained, and changed. He said to explain that idea:

"Give me a dozen healthy infants, well-formed, and my own specified world to bring them up in and I'll guarantee to take any one at random and train him to become any type of specialist I might select -- doctor, lawyer, artist, merchant-chief and, yes, even beggar-man and thief, regardless of his talents, penchants, tendencies, abilities, vocations, and race of his ancestors."

As can be seen with this claim Watson showed the idea of the brain as black box, in which the input of the environment (stimulus) will make a response always unless the child has got a health problem that limit the learning process. That evidence shared for behaviourist is consider as a weak for many other theories of learning because with the idea of black box behaviourist can not explain internal process of the brain that seems to have a high influence on behaviour.

Exist two schools of thought around behaviourism each represented each by one famous psychologist, Pavlov which is more represent figure of classical conditioning and Skinner with operant conditioning. Both recognise the importance of reinforcement of the input and have made some investigations with animals to prove that, but differs in the way of do it. On one hand Operant conditioning that deals with the modification of "voluntary behaviour" or operant behaviour that operates on the environment and is maintained by its consequences. In that Reinforcement and punishment, the key of operant conditioning, are either positive (delivered following a response), or negative (withdrawn following a response) (Skinner 1938). On the other hand, Classical conditioning used behavioural training in which a naturally occurring stimulus is paired with a response and then previously neutral stimulus is paired with the naturally occurring stimulus with that eventually, the previously neutral stimulus comes to evoke the response without the presence of the naturally occurring stimulus, those two elements are then known as the conditioned stimulus and the conditioned response. Thus, both give significant information about learning process and the relation with reinforcement and has been very criticised, especially for assuming that human's behaviour is like animal's behaviour, however the one that has received more influence and has been criticised is skinner Operant conditioning, for example Chisholm (1957) said that Behaviour can't be described and explained without making ultimate reference to mental events or to internal psychological processes as they pretend. Furthermore, it is possible that Skinner and Pavlov have some weakness at the time of expressing some concept but has a high importance in story of psychology and education and still Nowadays ideas of their studies are used in those areas.

One aspect derived of behaviourism theory is how a teacher can manage the environment to motivate a child. For that reason Behaviourist view in terms of teaching includes highly-structured lesson plans. Strategies include approaches such as lectures, demonstrations and directed instruction. This includes punishing bad behaviour and encouraging good behaviour and will preserve healthy teacher pupil boundaries. (Bolles, RC 1979) Most common techniques of this approach are positive reinforcement, negative reinforcement, punishment, token economy, self-management, extinction, shaping, contracts, time out, and systematic desensitization, those seems to be very effective especially on kindergartens and primary schools.

It is difficult to describe the term of constructivism, usually this term is used to be referred to a theory that suggests that humans construct knowledge and meaning from their experiences in an active, constructive social process. The learner is an information constructor and new information is linked to prior knowledge, thus mental representations are subjective. But exist some disagreement in that definition even for the most important figures of this, Vygotsky and Piaget, that has significant differences in the way of seen cognitive development that can be seen on Rummel (2008) , that claimed that however, Piaget believed that cognitive development was a product of the mind "achieved through observation and experimentation" whereas Vygotsky viewed it as a social process, achieved through interaction with more knowledgeable members of the culture" and Piaget referred to his work as "cognitive" constructivism while Vygotsky referred to his work as "social" constructivism.

To understand this claim make by Rumell (2008) it is necessary to have a further information of both theories. On one hand Piaget suggested that humans are unable to automatically understand and use information that they have been given, because they need to "construct" their own knowledge through prior personal experiences to enable them to create mental images always depending on two major elements "ages" and "stages" that According to him, "help to predict what children can and cannot understand at different ages." And "what cannot do a child after one stage when pass the critical period that makes it possible". On the other hand Vygotsky that was not believe in the stages that Piaget proposed an based his theory in one aspect that by him is essential and played an important role in learning, the role of

social and cultural interaction, as a result of that Vygotsky describe the zone of proximal development (ZPD) (distance between a child's "actual developmental levels determined by independent problem solving" and the child's level of "potential development as determined through problem solving under adult guidance or in collaboration with more capable peers")(Vygotsky,1978)and the process of scaffolding which is essentially the process that help to reach the next level of ZPD.

As happened with behaviourism teaching management has been very influenced for Constructivism theories, firstly with Piaget's cognitive constructivism which has change the role of the teacher , giving the responsibility of prepare the lesson, structuring it to allow and motivate pupils to investigate and manipulate the environment to construct the knowledge with the help of his or her classmates. Making that the children will become the centre of process. And then with Vygotsky socio-cultural Constructivism that unless still have the teacher centred role as behaviourist have, has change the way in that teacher acts to motivate the learners, giving them the responsibility of scaffold pupils' ZPD in order to develop as much as possible their abilities and capacities.

COMPARISON

There are many differences between Behaviourism and Constructivism; in fact it is common to explain Constructivism making a comparison with the first. The main difference is that behaviourism emphasizes observable, external behaviours avoiding reference to meaning, representation and thought, while constructivism takes a more cognitive approach. This difference has important implications for all aspects of a theory of learning. The way in which knowledge is conceived and acquired, the types of knowledge, skills and activities emphasized, the role of the learner and the teacher, how goals are established: all of these factors are articulated differently in the constructivist perspective. (Murphy 1997)

An aspect that can be compared in both theories is the way in which behaviour is approach, even when both wants to modified a behaviour, constructivism create systematic methods and structured conditions in order to have a response wanted, but on the other hand, behaviourist use acts or responses that occurred eventually and naturally to conditioned or change the response predicted. However even when both are very useful that relation can give an impression that constructivism can be use in more scenarios than behaviourism, because of have an structure method of learning that don't have to depend on eventual facts.

To summarise, in this paper has been analysed two theories of learning. Firstly, behaviourism which principals' implications are positive reinforcement, negative reinforcement, punishment, token economy, self-management, extinction, shaping, contracts, time out, and systematic desensitization, that emphasizes external behaviours avoiding internal changes and approaches. And then Constructivism which principal implication is a change in the role of learner and teacher, focused on the first one, is more concerned about cognitive approach.

CONCLUSION

Both theories, Behaviourism and Constructivism, still has high importance in actual schools and universities and are use in classrooms all around the world, however in a society like we have, that is very complicated and have lots of things to learn, it impossible to choose one theory or method that fits with all requirements, maybe for that reason it is seems to be impossible to conclude with a better or more appropriated option between them. However, for that reason it is logical to say that nowadays the best teaching approachment is a mixture of all reviews, depending on the context and necessities of the classroom.

Bibliografía

- Bolles, RC (1979) . Teoría del Aprendizaje (2ª ed.) Nueva York: Holt, Rinhart, y Winston.
- Chisholm Roderick. (1957.) *Perceiving: a Philosophical Study*. Ithaca: Cornell University Press.
- Skinner, B.F. (1938). *The behavior of organisms*. New York: Appleton-Century-Crofts.
- Miller, P.H. (2011) *Theories of developmental psychology*. W.H. Freeman.
- Murphy, E (1997) *Constructivism: From Philosophy to Practice*.
- Rummel, Ethan. (2008). *Constructing cognition*. *American Scientist*, 96(1)
- Sutton, R. S., & Barto, A. G. (1998). *Reinforcement learning: An introduction*. Cambridge, MA:MIT Press.
- Vygotsky, L. (1978). *Mind in Society: The Development of Higher Psychological Processes* MA: Harvard University Press.
- Watson, J.B. (1913). "Psychology as the Behaviorist Views It". *Psychological Review*
- Wood, D. (1998) *How children think and learn : the social contexts of cognitive development* . Oxford: Basil Blackwell.