

CONSTRUCTIVISM: A THEORY OF LEARNING AND TEACHING

Dr. FAIZA ALTAF, DAISY PRIYANATH

Teacher, Research Scholar

DIET, Amroha, U.P, JMI,N.Delhi

Abstract- *The basic idea of constructivism is that the learner must construct knowledge; the teacher cannot supply it. The constructivist paradigm as advocated by Piaget (1960/1981) and Bruner (1990) stresses that whatever gets in to the mind has to be constructed by the individual through knowledge discovery. Its emphasis is on how a student constructs knowledge. In other words, this theory holds the view that learning is an active process in which learners construct new ideas or concepts based upon their current or past knowledge.*

Key words- Constructivism, Child centered, Pedagogy, NCF-2005.

Introduction

At present constructivism is a popular idea associated with teaching and learning .Constructivism stresses the importance of considering what is already in the learner's mind as a place to initiate instructions. According to Sextin, Martin and Galovich (1994)(cited in Chiopella, Koballa, Collette (1998) **constructivism is a theory that assumes knowledge can not exist outside the bodies of cognizing beings.....knowledge is a construction of reality.** Learning is regarded as an active process whereby student personal meaning of the subject matter through their interaction with the physical and social world. It is the student who must make sense out of the experiences. Sood (2004) emphasized that constructivism is a philosophy of learning founded on the premise that by reflecting on our experiences. Learning, therefore, is simply the processes of our models to accommodate of our experiences. In a constructivist class room, learning is constructed .It includes an ensemble of multiple and valued activities. The teacher helps create situations, where students feel safe. The teacher should also create activities that lead the students to reflect on his prior knowledge and experiences. In a constructivist classroom, science teacher functions as a facilitator of learning.

The basic idea of constructivism is that the learner must construct knowledge; the teacher cannot supply it (Bringuier, 1980).The idea of constructivism is not new ,the glimpse of constructivism also seem in the work of Piaget and Bruner and Vygotsky .The constructivist paradigm as advocated by Piaget (1960/1981) (cited in Joan .S, 1980) and Bruner (1990) (cited in Joan .S, 1980) stresses that whatever gets in to the mind has to be constructed by the individual through knowledge discovery. Its emphasis is on how a student constructs knowledge. In other words, this theory holds the view that learning is an active process in which learners construct new ideas or concepts based upon their current or past knowledge. Constructivism is an approach in which the learner is building an internal illustration of knowledge, a personal interpretation. Sood (2008) also advocates that "learning science as a constructivist conceptual change process" .Science is a human construct and human activity, learner are naturally curious. 'Child is a natural learner, and knowledge is the outcome of child's own activity.' They actively engage with the world around them. We need to nurture and build on their active and creative abilities-their inherent interest in meaning making. So teachers need to build up effective activities and strategies which facilitate student's exploration and search of conceptions; co-operation and collaborative learning (in the classroom) .Which help in meaning, and presents socio-cultural view of knowledge construction.

According to Simpsons (1993) (cited in Joan.S, 1980), constructivism is an n approach in which the learner is building an internal illustration of knowledge, a personal interpretation. Constructivism emphasizes the careful study of the processes by which children create and develop their ideas. According to constructivism approach learning is an interaction between the learner and the learning environment. In other words, learning occurs if a student can construct his or her own knowledge and apply or generalize its meaning to new situations.

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Effective instruction depends on the teacher's ability to understand how students make sense of the stimuli, rather than how teachers make sense of those stimuli by themselves. According to Driver (1996), "If it is accepted that learning involves the restructuring of students conceptions, then not only do educators need to appreciate the ideas that children bring to the learning situations, but they need to understand the processes by which conceptual change occurs in order that this can be taken into account in the design of learning programs. Constructivism advocates learner-centered, activity-oriented interactive pedagogic approach. Constructivist learning process is facilitated by the skilled teacher who engages students in thinking, questioning, testing ideas, exploring and representing ideas. So the teacher's own role in children's cognition could be enhanced if they assume a more active role in relation to the process of knowledge construction in which children are engaged. A sensitive and informed teacher is aware of this and able to engage children through well chosen tasks and questions, so that they are able to realize their developmental potential. Teaching from a constructivist referent might view the learning process as a journey that begins where the students resides. The voyage is a collaborative effort between the learner and the teacher.

NCF-2005 and Constructivism

National curriculum framework developed by NCERT in 2005 suggests a paradigm shift from transmission of knowledge by the teacher to construction of knowledge by the learners. It is totally focusing on child-centered activity based approach, which is an outcome of constructivist view of learning. It emphasizes that learner should be helped to construct their own knowledge through experience, action and reflection. It is therefore necessary to make teachers understand constructivist teaching. In constructivist approach we consider how the children learn. The learner constructs his knowledge using prior experiences and new information. Constructivist knowledge implies reorganization of existing cognitive map (learner thinking). The emphasis is on development of thinking skills.

Constructivism and Child Centered Education

Through the centuries down to the eighteenth, education had approached in both theory and practice from the point of view of adult interest. Children were regarded as little adults and were expected to act as such. In the middle of 18th century Rousseau (1712-18) (cited in an article by NCERT in 1998) made a direct view on this conception, and he emphasized on child-centered education. He contended, "The child was in sense a little adult. The child should be educated in natural surroundings in accordance with his own nature." Following Rousseau, all major educational theories and movements took the child in to account to great extent than previously.

Dewey the education philosopher also talks about child-centered education. He said that the child can learn the learning material if the things are based on his interest. He also strongly opposed the role of rote memorization in the learning process and emphasized on learning by doing. His student Kilpatrick had introduced the Project method, which can be used to teach the students. Montessori (1870-1952) (cited in an article by NCERT in 1998) propounded the concept of auto education, which implies that the child should be free to learn things according to his own choice. Children learn better through play-way methods. She felt that the role of the teacher was that of observer rather than an instructor. According to Tagore (1861-1991) (cited in an article by NCERT in 1998) "The school is not like a machine for imparting information to students". He organized children education at Shanti Niketan in accordance with the principle of child-centered education.

The child centered approach will help to increase self-learning which means that teacher does not make children learn but they create such guidance. Recently the constructivist strategies have been designed to help people construct meaning for them, Brooks and Brooks (1993) has suggested the following strategies for a constructivist teaching which is based on child-centered approach.

- Encourage and accept students' autonomy and initiative.
- Seek elaboration of students' initial response.
- Nurture children's natural curiosity through use of learning cycle's models.
- Use primary sources, along with manipulative interactive and physical materials.

Conclusion

Learning is a process which includes expanding body of knowledge, covering ever new domains of experience. Process of learning should always be interesting to the learner. It becomes interesting only when it includes the participation of students. If our objective is that the child must understand the concepts then doing is the only method of teaching, thus constructivism approach is the only way of teaching, if we really want our children to learn. Learning is understanding, and not just memorizing. In constructivism learning should be as an activity which creates an opportunity for the learner to study in its proper perspective; they can see the things operationally, can use processes and can replace subjective opinions by beliefs based on empirical evidences. Learning as an activity has many psychological implications which are related to both learning and teaching. Improvement in the activity results in better understanding of the phenomenon. Active involvement of the learner is helpful in acquisition of skills. We can conclude here that constructivism is an appropriate approach for learning and teaching practice.

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