

## Relevance of Theory of Constructivism in Today's World

Anupam Biswas<sup>1</sup>& Dr. Arjun Chandra Das<sup>2</sup>

<sup>1</sup>Assistant Teacher, Hijuli Siksha Niketan, Nadia, W.B.

<sup>2</sup>Assistant Professor, Department of Education, University of Kalyani, W.B.

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### ABSTRACT

*The theory of learning is a complete unit in Education but it is at the same time very essential. All the theories of learning tried to solve issues arisen out in the teaching learning process. The internal psychology of learners has been deprived of and has not been discovered. The analysis and synthesis of psychology of learners are carried out by the constructivists. Their theories presented the psychology before us to enhance the programme of teaching-learning. This paper has shown the relevance of this constructivist theory of learning in the present educational scenario. It also tried to show how this theory of constructivism helps learners to be self-reliant.*

**Keywords:** Constructivism, active process, stages, interaction etc.

### Introduction:-

Since the dawn of civilization of education our present and ex-educators with their effort had given several theories of learning. The initiatives behind the no doubt deserve to be credited. Their efforts had not become fruitless. If we focus on theories of learning in respect of their origin historically, we may conclude that these theories are classified into broad categories

- a) Behaviourism
- b) Cognitivism

Behaviourism is based on observable changes in behaviour whereas Constructivism is based on thought process behind behaviour, what is happening inside the learner's mind.

But in recent decades Constructivist theorists have extended that the traditional focus on individual learning to address collaborative and social dimensions of learning. According to Fosnot(1996), "Constructivism is a psychological theory that constructs learning as an interpretative, recursive, building process by active learners interacting with the physical and social world."

The basic principles of constructivism are highlighted here:-

- Learning is an active process in which the learner uses sensory input and constructs meaning of it.
- People learn to as they learn.
- Physical actions and hands on experience may be necessary for learning especially for children, but if not sufficient, we need to provide activities, which engage the mind as well as the hand.
- Learning invokes language.
- Learning is contextual.
- One needs knowledge to learn.
- Learning is not instantaneous, rather activities driven.
- The key component to learning is motivation
- These basic principles of constructivism are highlighted in the works of Jean Piaget(1896-1980) and Lev Vygotsky(1896-1934).

**SIGNIFICANCE OF CONSTRUCTIVIST THEORY:** Constructivist theory is a theory of learning. Its significance lies in it's a) influences on education and b) its difference traditional theories of learning.

a) Influences on Education

- 1, Curriculum-Constructivist theory stressed on the elimination of a standardized curriculum. Instead it promotes using curriculum customized to the students' prior knowledge. It also emphasizes hands-on problem-solving. Therefore, the mechanical traditional standardized curriculum is exposed as it lacks of pupil's prior knowledge based experience; it only puzzle pupil's learning system. Prior knowledge should be in memory when a teacher fixes up the teaching-learning contents. Moreover, the curriculum expert committee must be acknowledged this prior knowledge of pupils who digest easily what the curriculum provides for them in teaching-learning process. Actually constructivist theory tries to present a psychological sound curriculum.

- 2, Instruction- The constructivist theory is considered a theory about learning not a description of teaching. This theory compels teachers to be instructors who must encourage students to analyse, interpret, and predict information. These instructors focus on making connection between facts and fostering new understanding in students. They should pose problems of emerging relevance to students. Instructors should structure learning activities around primary concepts. They should seek and value students' point of view. They should adapt curriculum to address students' current understandings. They must assess students' learning in the context of teaching. Thus instructors must be guide, philosopher and friend to students.
- 3, Assessment- Constructivist theory of learning stresses an assessment which becomes part of the learning process. According to this theory, students play a larger role in judging their own progress. This theory calls for continuous assessment tools. Therefore, students can reduce their dependence on teachers and try to be self-reliant.

b) Difference between Constructivist theory of Learning and Traditional theory of Learning- According to traditional theory of learning, classroom looks like a one person show with a largely uninvolved learner. Traditional classes are usually dominated by direct and unilateral instruction. Traditional approach followers assume that there is a fixed body of knowledge that the students must come to know. Students are expected to blindly accept the information they are given without questioning the instructors. The teacher seeks to transfer thoughts and meaning to the passive students leaving little room for student-initiated questions, independent thought or interaction between students.

On the contrary, constructivist theory has given students a central position in teaching-learning process. Here students can pose a question and then work together in small groups to discover one or more solutions. Students play an active role in carrying out experiments and reaching their own conclusion. Teachers assist the students in developing new insights and connecting them with previous knowledge, but leave the discovery and discussion to the student-groups. Questions are posed to the class and student-teams and work together to discuss and reach agreement on their answers, which are shared with entire class. Students are able to develop their own understanding of the subject matter based on previous knowledge, and can correct any misconceptions they have. Both teaching styles can lead to successful learning but it has been shown that students in the constructivist environment demonstrated more enthusiasm and interest in the subject matter.

#### **OBJECTIVES OF THE STUDY:-**

- To study the relevance of constructivism in the present scenario.
- To examine its assistance for transforming learners into self-reliant.

#### **REVIEW OF RELATED LITERATURE:-**

Dagar V and Yadav A, Department of Education, Central University of Haryana, Mahendergarh District Pali, India in their article, entitled, "Construction: A Paradigm for Teaching and learning", have mentioned that the most important aspect on which constructivism focusses is knowledge construction. Knowledge construction is viewed differently by different philosophers and psychologists. Jean Piaget's view is constructivist because he firmly believed that knowledge acquisition is a process of continuous self-construction. Children acquire knowledge through stages of assimilation, accommodation and equilibrium in the process of knowledge construction.

Dr. Judy Peters, Dr. Rosie Cornude, Dr. Janet Collins, Division of Education, Arts and Social Sciences, University of South Australia in their article, "Towards Constructivist Teaching and Learning" have asserted that constructivist approaches require learners to be active and confident in themselves and their abilities. It takes confidence for learners to admit that there are gaps in their knowledge, or understanding, and to take the risk of learning new ways thinking. Learners may feel vulnerable about admitting their ignorance to others. This has clear implication for the way in which class rooms are organised and the quality of the learning relationships which need to exist if learning is to take place.

**METHODOLOGY:-** Methodology takes a significant role in any type of research as the reliability and validity of the findings depend upon the methods adopted and applied in the study. This paper is historical and qualitative in nature. It is mainly based on secondary data and is largely collected from different sources like books, journals, and articles. This study is conducted mainly by drawing upon the works of Jean Piaget and of Lev Vygotsky by applying analytical cum descriptive method for the research. The investigator has made an attempt to explore the relevance of constructivism in the present educational system.

**EXPLANATION OF SIGNIFICANT TERMS:-**

**1) CONSTRUCTIVISTS:-** According to Oxford Dictionary, constructivists mean practitioners of a style in which mechanical objects are combined into abstract mobile forms. So, the constructivists believe that learners construct their own reality or at least interpret it based upon their perception of experience, so one's knowledge is a function of one's prior experience, mental structure and beliefs that are used to interpret objects and events.

**2) CONSTRUCTIVISM:-** It is a theory about learning, not a description of teaching. Learners construct knowledge for themselves. Each learner either individually constructs or collaboratively constructs knowledge and meaning as he or she learns.

**3) COGNITIVE CONFLICT:-** The phrase that the constructivists use for idea of cognitive dissonance and can be broadly defined as the mental discomfort produced when someone is confronted with new information that contradicts their prior beliefs and ideas.

**4) SCHEMAS:-** Schemas are mental systems or categories of perception and experience.

**5) ASSIMILATION:-** The process of altering or modifying existing schemas or creating new ones in response to new information.

**6) COGNITIVE DISEQUILIBRIUM:-** The out of balance state that occurs when a person realizes that his/her current ways of thinking are not working to solve a problem or understand a situation is called cognitive disequilibrium.

**7) ZONE OF PROXIMAL DEVELOPMENT:-** The area where the child cannot solve a problem alone but can be successful under adult guidance or collaboration with a more advanced peer is called ZPD.

**8) SCAFFOLDING:-** The process of giving information prompts, reminders, and encouragements at the right time and in right amounts, and then gradually allowing the students to do more and more on their own is called scaffolding.

**Analysis the Objectives:****Relevance of constructivism in the present scenario:**

The constructivist theory of learning is a landmark in the history of educational system. Educational psychologists had suggested both individualistic and socialistic learning at a time. It is the theory of constructivists that has fulfilled word by word that suggestion.

Jean Piaget's constructivism was based on his view of the psychological development of children. In his words, "Knowledge is not a copy of reality. To know an object, to know an event, is not simply to look at it and make a mental copy or image of it. To know an object is to act on it. To know is to modify, to transform the object and to understand the process of this transformation, and as a consequence to understand the object is constructed." (Piaget- Part: "Cognitive Development in Children" September, 1964) Jean Piaget suggested four developmental stages:-

- 1) Sensori-motor stage (from birth to about two years)
- 2) Pre-Operational stage (from two to seven years)
- 3) Concrete -Operational stage (from seven to eleven)
- 4) Formal- Operational stage (from twelve to fifteen)

Behind this division of developmental stages, Piaget had to express a great view. According to Chambliss (1996) "Piaget's these parts" Ages and Stages "predict what children can and can not at different ages and the theory of development describes how children do development of cognitive abilities."

Jean Piaget has formulated his theory of cognitive constructivism. He articulated mechanisms by which knowledge is internalized by learners and he suggested that through the process of assimilation, accommodation, individuals construct new knowledge from their experience "Every acquisition, accommodation becomes material for assimilation but assimilationalways resists new accommodation." (Jean Piaget: Part: 'Cognitive Development in Children.' September, 1964). When learners learn to assimilate, they learn the new experience with their existing framework without altering that framework. But sometimes learners feel cognitive conflict that leads to cognitive disequilibrium. According to Piaget, the learners try to resolve the conflicts and in doing so, engage in reflective abstraction about the conflict: "Reflective abstraction, however is based not on individual actions but on co-ordinated actions." Here Piaget suggested another aspect that conveys interactions among learners. Thus we come to learn a socialistic view of learning in the theory of Piaget that develops into another aspect of learning i.e. ADAPTATION. This adaptation moves from a state of dis-equilibrium to a state of equilibrium. As a result of it, existing knowledge structures are re-organised or re-constructed and

new knowledge structures are constructed. In sum, assimilation, accommodation and adaptation account for developmental change in schema of learners. So, learners themselves learn.

But Jean Piaget did not neglect the role of teachers in the life of learners. Only he warns teachers in his words: "I think, when you teach a child something, you take away for ever his chance of discovering it for himself." So, he suggested the teachers to promote discovery learning: "Every time we teach a child something we keep him from inventing it himself. On the other hand, that which we allow him to discover for himself will remain with visible for the rest of his life." Jean Piaget wanted learners be self-sufficient, self-independent and self-reliant. Teachers only assist them in this respect, pose problem of emerging relevance to students, structure learning activities around primary concepts and value students' point of view. The concept of teaching in Piaget is mentioned here: "Teaching means creating creating situations where structures can be discovered." Thus learners must self-reliant with the assistance of their respected teachers as instructors.

This Piagetian individualistic and interactional learning was carried forward socialistic outlook by Lev Vygotsky who asserted in his "Mind in Society" (1978): "Every function in the child's cultural development appears twice: first, on the social level; second between people (inter psychological) then inside the child (intra psychological). So, Vygotsky has stressed upon the interaction in the classroom between the learners themselves: "By giving our students practice in talking with others, we give them frames for thinking on their own." But he has not neglected the role of teachers and he has introduced ZONE OF PROXIMAL DEVELOPMENT. Here the teacher must scaffold, assist students. In fact, Vygotsky has specified the the function of teachers: "The teacher must adopt the role of neither facilitator nor provider." Actually Vygotsky suggested the learners' active role in teaching-learning process and thereby learners must be self-sufficient in life: "All the care of Vygotsky's theory is the sense that children must be actively involved in teaching-learning relationship with more competent others who both learn from children and draw them into fuller membership in their cultural world." (J. Tudge and Scrimster in 'Lev Vygotsky') Therefore, in the concept of Vygotsky' constructivist theory of learning we have come across an extension of Piagetian theory of learning.

Today's world is a world of technology. In this technological world children are confined in a enclosed room. If we can offer a scope to them to let them in a free atmosphere where the pupils collaborate or individual construct their knowledge they can develop themselves. Only constructivist approach can be suitable for the development of students.

- 1) Constructivist theory of Piaget and Vygotsky teaches students to consider multiple perspectives on a given situation or phenomenon.
- 2) Their theory develops flexibility in thinking and reasoning skills as students compare and contrast various possibilities in order to draw their conclusion.
- 3) According to this theory, students also learn to make connection and associations by relating the subject matter to their own life-experience.
- 4) Under this theory, students must learn how to clearly articulate their ideas as well as collaborate on their tasks effectively by showing the burden of group projects. Students can therefore exchange their ideas and so they may learn to negotiate with others and to evaluate their contribution in a social acceptable manner.
- 5) Constructivist theory recognizes and validates the students' point of view. So, that rather than being 'wrong' or 'right', the students can reevaluate and readjust their knowledge and understanding.

Moreover, students adapt learning to the real world, gaining problem-solving skills and ability to do a critical analysis of a given set of data. These skills enable the students to adapt to constantly changing real world-environment. Therefore, we prove its relevance in this today's world.

#### **Assistance for transforming learners into self-reliant.**

Jean Piaget believed that children construct an understanding of the world around them, experience discrepancies between what they already know and what they discover in their environment, then adjust their ideas accordingly. Moreover, Piaget claimed that cognitive development is at the centre of human organism, and language contingent on knowledge and understanding acquired through cognitive development.

Like Piaget, Vygotsky believes that young children are curious and actively involved in their own learning and the discovery and development of new understanding/schemas. However, Vygotsky placed more emphasis on social contribution to the process of development whereas Piaget emphasized self-initiated discovery. According to Vygotsky, much important learning by the child occurs through interaction with

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more advanced students or teachers or instructors. Vygotsky refers to this as co-operative or collaborative dialogue. The child seeks to understand the actions or instructions provided by teachers and internalizes the information, using it to guide or regulate their own performance. Thus the children become self-reliant

**CONCLUSION:**

Traditional class room system has been broken into pieces in the theory of constructivism. Both the theories of cognitive constructivism and social constructivism have tried to explore the potentialities of learners. In the cognitive constructivist theory of Piaget we have come across that exploration and discovery are more important than teaching. To explore and to discover knowledge by learners themselves are not easy tasks. But Jean Piaget has made it in his theory. So, his innovative theory may claim its credit.

At the same time in the theory of Social Constructivism of Vygotsky we have noticed that only learners can not execute knowledge themselves. This gigantic task of exploration and discovery will be done smoothly with the help of teachers who may work not as teachers but as facilitators only. Therefore, we can conclude that in the life of pupils, the constructivist theory learning.

**REFERENCES:**

1. Piaget Jean- "Part 1: Cognitive Development in Children" (September, 1964)
2. Vygotsky Lev- "Mind in Society"
3. Tudge J and Scrimter - "Lev Vygotsky"
4. Dagar V and Yadav A, Development of Education, Central University of Haryana, Mahendergarh District Pali, India; "Constructivism: A Paradigm for Teaching and Learning"
5. Peter Judy Dr, Le Corn Rosie Dr, Collins Janet Dr; Division of Education, Arts and Social Sciences, University of South Australia; "Towards Constructivist Teaching and Learning"