

# HIGHER EDUCATION CURRICULUM: CONSTRUCTIVIST APPROACH

Amitava Dey  
Ph.D , UGC NET , WBSET

## Abstract

*Higher education is considered to be the apex in all educational endeavors. It is imparted by universities and other institutions of higher education & research. It embraces teaching and learning for the promotion of scholarship faculties and research attitude among students. It mainly focuses on knowledge creation and its dissemination. Apparently, teaching, learning and research are considered to be the core activities in higher education. Besides, there are some associated activities which seem to augment the outcomes and effectiveness of higher education. Such activities include instruction and instructional mechanism, learning activities, campus environment and infrastructure, innovations and interventions etc. In this paper the author will try to discuss and to explore the significance of constructivist approach at higher education level.*

**Keywords:** *Constructivism , Educational Constructivism , Curricular transactions , Learner ,Teacher , Higher Education*

---

## INTRODUCTION

The epistemology of constructivism proposes that human constructs knowledge by giving meaning to their current experiences based on their previous experiences, knowledge, mental images and beliefs. Phenomenon and things external to an individual doesn't carry any meaning or knowledge in itself. Meanings and understanding of an external phenomenon or things are generated within oneself through a mental process. Thus the source of every reaction to the external world is one's own mind. This notion challenges the idea of common reality and proposes that reality is that which we perceive. Constructivists thinkers like Jonnassen (1991) propose an instrumental role to mind in interpreting experiences in the real world that helps to produce a knowledge base that is idiosyncratic. Jonassen (1991) talks about constructivism as follows: Constructivism, founded on Kantian beliefs, claims that reality is constructed by the knower based upon mental activity. Humans are perceivers and interpreters who construct their own reality through engaging in those mental activities, thinking is grounded in perception of physical and social experiences, which can only be comprehended by the mind. What the mind produces are mental models that explain to the knower what he or she has perceived.

We all conceive of the external reality somewhat differently, based on our unique set of experiences with the world and our beliefs about them. (p. 10). Jerome Bruner (1986) claims that constructivism began with Immanuel Kant who, in his Critique of Pure Reason, argued that the human mind is an originator of experience rather than a passive recipient of perception. Kant believed that the external physical world is known only through individual sensations. Constructivism values the subjective experiences of the child in all educational efforts. It considers active role of the subjective experience of the children in knowledge, morality and personality. It was Piaget who proposed that children self-construct their personality and Online Refresher Course on Curriculum, Pedagogy and Evaluation for Higher Education morality. The research conducted by Piaget provided robust evidences for this self-construction which are not taught to them in any way (for example, Piaget, 1932/1965; 1936/1952; 1929/1960). The acceptance of this perspective has resulted in the origin and proliferation of educational constructivism.

## OBJECTIVES

1. To Acquaint the basic idea of constructivism
2. To understand the educational constructivism
3. To Integrate constructivist practices in curricular transactions

### **Methodology**

As the study is merely descriptive in nature the investigator has made an honest attempt to study the various relevant books/Journals/various website for the information regarding the Higher Education and Constructivism. The investigator has tried his utmost to make the study as objective as possible by employing different previous studies and information available on internet.

### **Educational Constructivism**

Applied to the field of education constructivism posed formidable challenge to traditional theories of learning, especially behaviorism. Traditional theories of learning have defined learning as acquisition of knowledge. The role of the student is thus limited to a receptacle, in traditional learning theories, where learner receives whatever is offered by the teachers and other sources of knowledge. This notion is subject to severe criticism on account of limiting the role of learner in as meek receptor in the process of learning. In the wake of the advancement of constructivist philosophy, a totally new perceptiveness on learning loomed up. Constructivism redefined learning as a process of constructing knowledge by the learner. Learning as construction of knowledge by the learner radically changed the role of the learner in the process of learning. This not only changed the role of the learner, instead demands a totally fresh outlook on the way we perceive education.

Jean Piaget, Bruner and Lev Vygotsky are the most influential proponents of educational constructivism. The essence of the scholarly writings of Piaget theorized that children use different mental structures to think about and make sense of the world. As Piaget give emphasis to the biological readiness and life experiences of the children as the determinants of the structures available to children. Bruner in *The Process of Education* went beyond Piaget and argued that biological structure shall not be only the determinants of an individual's ability to derive meaning, interpretations and thereby construction of new knowledge. He proposed that anything can be taught to any children in an intellectually honest manner. Vygotsky emphasized the role of society and culture as a key determinant in the process of knowledge production. The social system in which the learner is involved has detrimental role in interpretation and derivation of meaning by a learner.

The gist of the discussions above is that construction of knowledge is a process that happens through an active mental process of the constructor of knowledge. If this process to be happened, it need certain conditions to be satisfied. They are:

1. A problematic situation that demand/ challenge the students to resolve a problem Online Refresher Course on Curriculum, Pedagogy and Evaluation for Higher Education
2. Support from the surroundings to address the problem and resolve it.
3. The support thus extended should motivate the students to 'perceive' the problem. Perception of the problem happens only when students can relate their personal experiences with the problem under consideration.
4. Once the problem is perceived the learner has to make a plan for responding to or resolving it.
5. Since the way problems perceived will differ with each student there is ample scope for differential responses and resolutions to the problem faced. This process necessitates readiness for respecting the divergent answers that derive from the students.
6. As the learners advance in their ability to process the experience the knowledge construction will become more complex and advanced as they compress the meaning of things/ phenomenon/ experiences with the symbolic system of words and language.

### **Learner in constructivism**

Constructivism views every learner as a unique individual. Every individual has a unique way of approaching the stimulus in the environment depending upon their intellectual, emotional, social, cultural and several other influences that affects them. Interplay of these factors makes every learner a complex and multidimensional entity. The complexity and multidimensionality of the learner influences the way they approach and process content or task available for learning. If these influences are undermined the learning will remain as a transitory phenomenon. Constructivism not only acknowledges the complexity and multidimensionality of the learner but also use it as a source to be used for effective learning.

Culture and its influence on the learner is another important aspect to be highlighted about constructivist viewpoint on learner. Every individual is the product of their culture. Culture influence the way they perceive and act upon something. Classrooms are treated as assemblages of culture brought in by the students. Opportunity for interpreting the content or task under consideration for learning through the cultural lens of the students have enormous benefits for the learner. This is also beneficial in a social context of learning in which the students get opportunity to understand the perspectives of students belonging to different cultural background. Interaction with students from other cultural backgrounds broaden the learner's understanding on specific learning tasks and content. Online Refresher Course on Curriculum, Pedagogy and Evaluation for Higher Education Constructivism assign considerable part of the responsibility of learning to the learner (Glaserfeld, 1989). This is a major shift brought in by the constructivist philosophy, which drastically changed the role of learner in learning process. Von Glaserfeld (1989) emphasized that learners construct their own understanding and that they do not simply mirror and reflect what they read. This not only ensured active role of learner in the learning process instead converted the role of the teacher as a facilitator who extend all possible support for learning. Motivation for learner is another important factor that distinguish constructivist notion of learner from other similar movements in education. Sustained motivation is essential for the construction of knowledge in the learning process. Sustained motivation depends upon the thrill enjoyment derived in the process of learning and the satisfaction derived through its output. These feelings of competence and belief in potential to solve new problems, are derived from first-hand experience of mastery of problems in the past and are much more powerful than any external acknowledgment and motivation. Teacher and the learning environment has a significant role in the maintenance of a sustained motivation in learning.

### **Teacher in constructivism**

Constructivist teacher is not a hard task master who considers students as receptacles to be filled with knowledge. Learner as a constructor of knowledge redefines the role of teacher as a facilitator for learning. Facilitators setup a learning environment that motivates and challenge the learner to plunge in to the process. Hence one of the most important roles of the teacher is to problematize the knowledge and use them as materials to be resolved by the teacher. Problematisation of the knowledge needs apt understanding age abilities interest cultural and social backgrounds and any other factors that influence learning of the learner of the learner. Since the students are treated as unique individuals in constructivism, the teacher has to fit the problems matching to the tastes of each student. Challenging the students to resolve the educational problem is the first step of the teacher in constructivist learning environments. Close monitoring is another important responsibility of the constructivist teacher. The purpose of monitoring is to ensure the productive student engagement in the process of learning. It helps the teacher to understand the areas where support is needed by the students. The students may venture in to tasks with their initial interest and minimum understanding about the problems under consideration. Resultant blocks during the learning process may impede the progress of learner in the process of Online Refresher Course on Curriculum, Pedagogy and Evaluation for Higher Education learning. Hence monitoring is very crucial to understand the need for support for the students. Identifying the need for support and extending it whenever is needed is detrimental in maintaining the learners' motivation and enthusiasm in learning.

The social constructivist theory views teacher also as an active learner and participant in the learning process. In this process of active learning teacher revises meanings about a particular topic, sometimes broaden their view points to accommodate the viewpoints of students. Hence the cultural capital of teacher is a significant contributor in the constructivist learning process. Learners compare their version of the truth with that of the instructor and fellow learners to get to a new, socially tested version of truth. The students may give a high value for the teachers' opinions and interferences in the learning process. This make the role of the teacher more complicated. Teacher has to ensure that the students do not model their learning outcome simulating the teacher. Utmost care may be extended to ensure that the students construct knowledge of their own but at the same time without the influence of teachers' interferences and opinions during the process. This makes the task of a teacher more complex to deliver than the role of teacher in traditional models.

Teachers in constructivist classrooms are not expecting the students to construct knowledge in line with the already developed knowledge. After it is quite impossible to think that someone has to develop the same knowledge which is available in the syllabus. Instead constructivism proposes that students should be motivated to think about the existing facts, concepts and any form of knowledge. In a constructivist perspective opportunity to ponder over the existing knowledge and to emerge new knowledge out of it. When constructivists talk about constructing knowledge, they are referring both to the content of knowledge and to the structure of knowledge. Constructivists take the view that it is through active reasoning that both content and structure are constructed simultaneously.



### **Implications of constructivism for curriculum construction**

The constructivist theory has strongly influenced the education practices of modern society. Setting up education according to constructivist practices demands serious restructuring in the curricular practices. The major viewpoints that influenced the curriculum construction at higher education level are described below.

Curriculums draw insights from constructivism needs to envision the expected conditions and support needed for its implementation. Proper planning of a supportive atmosphere is hence a Online Refresher Course on Curriculum, Pedagogy and Evaluation for Higher Education key factor for the success of a constructivist curriculum. The support includes a learning environment that facilitate students to address the specific learning task, proper interventions during the process of curriculum transaction and a proper evaluation system. First factor, the supportive atmosphere, depends up on the specific task/ content to be taught. Since this may vary from content to content and task to task a variable set up to facilitate the process of learning is very essential. Also there should be a considerable space for variability in setting up the learning environment depending upon specific backgrounds of the students. Second, the interventions to be done during curriculum transaction shall be in the form of physical, intellectual and emotional support. These interventions include helping students to access physical objects, support in all physical activities involved in learning, diagnosing and accommodating learning style differences, augmenting the skills that control a student's information processing system, and offering challenges support to students as a more knowledgeable other (Vygotsky, 1978).

Curriculum planning under constructivist theory give high emphasis to how a content is to be taught than what to be taught. This necessitates constructivist curriculums to explicitly state the ways of teaching, with sufficient leeway to accommodate the contextual differences. According to Resnick (1987) learning occurs most effectively in context and that context becomes an important part of knowledge associated with learning. Contextual support involves teachers' role as facilitators of learning and mentors who lend their hand in the form of cognitive apprenticeship and availability of multiple opportunity for the learner to express what they know in various kinds of activities (Newman, Marks, and Gamoran, 1995).

Curriculum transaction as a collaborative effort is another implication of constructivism in curriculum transaction. Cultural background of students brings in varieties of perceptions in any learning environments. This makes constructivist curriculum shelf of support system to nurture the varied perspectives of learners. The curricular activities in constructivist curriculum is a collaborative endeavor that is made up of learner's perspectives. It is not only that every learner is free to express their perspectives, but they are introduced to new perspectives of their fellow learners, which eventually modify and broaden one's own basic assumptions about the curricular content exposed to them. The collaborative effect upon learners has been well endorsed by researchers like Slavin, (1991, 1995) who observe that considerable evidence exists that students learn better in cooperative groups than they do individually. Thus engaging students in cooperative, collaborative and reciprocal teaching are quintessential characteristic of constructivist curriculum. Online Refresher Course on Curriculum, Pedagogy and Evaluation for Higher Education The assessment and evaluation strategies of constructivist curriculum is not separated from teaching and learning. Assessment is integrated in to teaching and learning. As the perceptual differences are the strength and back born of constructivism, promotion of homogenized answers are not entertained in the constructivist assessment. All responses of students are treated as valid perceptions to be addressed, constructivist strategies don't go with high stake standardized testing system followed by the modern educational practices. Every response to an issue or content is the way student views his world and hence it should be respected. This makes assessment practice a learning support system in which, teacher can give a task to the learner and observe how much and what kind of help they need in order to complete the task successfully (Newman, Griffin and Cole, 1989)

### **Constructivism in classrooms**

We have already seen that constructivism promotes learning through the construction of ideas through constructive ways with the facilitation of teachers. While planning for constructivist classroom it is important to give opportunity for the students to solve problems presented by the teacher. Hence the lesson plan, worksheet, educational assignments both inside and outside the classrooms and any other curricular activities need sufficient scope for the active involvement of the students. Constructivist classrooms never promote acceptance of facts, concepts and ideas unless they are verified individually as well as in groups by the learner. Classroom experience should reflect and promote different perspectives of the same facts, concepts and ideas presented in the classroom.

Keeping a daily journal by students is a practice entertained by many constructivist educationalists. This help the students to take note of their observations and experience and help them to form their own opinions and theories about the facts, concepts and ideas presented in the classroom. Opportunity

to verify and compare the journals with other students would help them to understand appreciate and even modify the perspectives maintained by them.

Constructivist classrooms promote asking questions by the students and answering them with the support of others. Teachers have important role in promoting questions and helping them to answer it collaboratively. Students presenting their perspectives and opinions on educational content which is been critically and reflectively received by students also is a popular strategy in constructivism. Allowing students to work in pairs or groups and Online Refresher Course on Curriculum, Pedagogy and Evaluation for Higher Education presenting the idea in the whole class which is followed by discussion among all students is another important strategy followed in constructivist5 classrooms.

As a whole any activity that promote an independent intellectual identity among students is the key purpose of all constructivist classrooms. Intellectual identity helps the students to develop their own theories and opinions about any academic content and even life events exposed to them. Opportunity for critical thinking, analytical capacity and inquiry are crucial to develop intellectual identity among students. Open ended questions, puzzling and challenging situations are very much helpful for the students to develop intellectual identity. Constant conversation between student and teacher and among students is another important condition that promote intellectual identity. Conversations help the students to formulate, revise and reformulate their hypothesis and theories about various academic questions they come across.

According to Tam (2000) there are certain basic characteristics of constructivist learning environments. They are:

1. Sharing of Knowledge between teachers and students.
2. Sharing of authority of class room activities between Teachers and students
3. Teacher as a facilitator and guide.
4. Formation of small Learning groups still highly heterogeneous in its nature.

The above characteristics constitute the basic essence of constructivism. In addition to that context in which the learning process is going on also have a great role in determining the nature and direction of constructivist classrooms.

## CONCLUSION

Learner as the producer of knowledge is a radical idea put forward by constructivism. The impact of this philosophy has drastically changed our traditional learning environment, role of the teachers and students and the organization of curriculum and curricular activities. The most important challenge for us is developing a new genre of teachers who can understand the importance of constructivism in our curricular activities. Proper application of constructivism in education can bring in miraculous changes in our classrooms.

## Bibliography

1. Jonnanssen, D.H. (1991).”Objectivism versus constructivism: Do we need a new philosophical paradigm?” Research and Development.39 (3) 5-14.
2. Bruner, J. (1986). Actual minds: Possible worlds. Cambridge, MA: Harvard University Press
3. Vygotsky, L.S. (1978).Mind in society. Cambridge, MA: Harvard University Press.
4. Newman, F.M/, Marks, H.M. & Gamoran, A. (1995). Authentic pedagogy: Standards that boost student performance. Issues in Restructuring Schools, Madison, WI: ( Report No.8)
5. Resnick, L. (1987). Education and learning to think. London: The Palmer Press.
6. Slavin, R.E. (1991). “Synthesis of research on cooperative learning.” Educational Leadership 48 (5) 71-82.
7. Slavin, R.E. (1995). Cooperative learning: Theory, research and practice (2nd ed.) Needham Heights, MA: Allyn and Bacon,
8. Newman, F.M/, Marks, H.M. & Gamoran, A. (1995). Authentic pedagogy: Standards that boost student performance. Issues in Restructuring Schools, Madison, WI: ( Report No.8)

9. Newman, D., Griffin, P. & Cole, M. (1989). The construction zone: Working for cognitive change in school. Cambridge, England: Cambridge University Press. Glasersfeld, E. (1989). Cognition, construction of knowledge, and teaching. *Synthese*, 80(1), 121-140.

