

CONSTRUCTIVISTS' CLASSROOM PRACTICES FOR DEVELOPMENT IN THE CONTEXT OF LEARNING OUTCOMES

KULDEEP YADAV

M.Sc., M.Ed. M.Phil., Net (Edu.)

It is the need of time to understand the changing needs of children as environment around us is changing rapidly and identifies need to change our educational practices. Children in past generations have finite knowledge with limited resources and very structured schools. A student learns as teachers write on blackboard and students were supposed to lap up and copy the information. But in modern time as knowledge is infinite with a variety of resources, the need of student to acquire knowledge and frame concepts for their harmonic development are also changing.

Our presupposition about childhood is also changing as children are acquiring knowledge. Our perceptions about what schooling should look like are a mismatch with the reality of today's children. As structure of families and society have been changed and digital media is creating an environment where such activities of childhood are changing dramatically. Child development is concerned with the development of motor skills, language skills and social skills along with development of cognition intelligence, reasoning and personality.

In order to provide our children with the skills, they need to function in today's society educators are examining new teaching and learning models that includes technology. Constructivist's education empowered students learning through the construction of meaning in a centered inquiry environment. Learning in constructivists terms is both the process and the result of questioning, interpreting and analyzing information using this information and think process to develop, build and after our meaning and understanding of concept and ideas and integrity current experiences with our past experiences and what we already known about a given subject. As knowledge is an act off receiving experiences, so learning enables us to construct own concepts of these experiences.

In modern classes teaching means providing a bit of information to learner with a view of teacher as an authentic authority to direct the classes as per his or her presuppositions, but teaching is more than this superstitious belief. Teacher is a guide to the student for better understanding and to develop their language to construct the concepts. Constructivists teaching practices can enable students to construct their own concepts in this changing knowledge

scenario. Constructivist's philosophies basic steps to discover the child's capabilities in a more systematic way are:

CONSTRUCTIVISTS THEORY

Children use symbols and relationships between symbols to make meaning of their environment, experiences and interactions. The learning theory that describes the process of creating knowledge from these symbols is known as constructivism. This learning theory postulates that an individual constructs their unique understanding of the world by experiencing, evaluating and incorporating their interpretations into their personal worldview. Constructivists learning is active rather than passive, learner centered rather than teacher directed.

Ernest von Glassersfied the father of constructivism believes that education has two main purposes.

- To empower learners to think for themselves
- To promote the next generation's way of thinking and acting

Constructivists learning may best put into practice by presenting the learner with issues and concepts in the form of problems to be explored rather than factors to be integrated. Teacher cannot tell students what concepts to construct or how to construct them but by judicious use of language, they can be presented from constructing in directions, which the teacher considers futile but which, as he knows from experiences are likely to be tried. Taking a perspective on education is to viewing education as a means of helping people to construct their own meaning.

According to idea of constructivism the individual plays a key role in actively constructing his or her own knowledge. In this way of thinking information cannot be directly given to children and adolescents and put into their minds but rather they discover knowledge through exploring their own world and thinking critically on the ideas presented to them. As children needs are different so meaning for particular concepts is different for them as per their social state. So teachers should become facilitators and guides rather than directors and molders of learning. They cannot force the information onto students but rather they can present the information to them and help them to explore and interpret it in their own way. So constructivists strongly believe that learner has the power to construct his or her own knowledge and way of thinking.

Constructivists learning can be broken into two subcategories:

1. Cognitive constructivism
2. Social constructivism

In cognitive constructivism approach emphasis is on the individual's cognitive construction of knowledge and understanding. Jean Piaget's theory best explains the idea of cognitive constructivism. Theory explains several stages that in individual inn cognitive development as they grow and mature cognitive constructivism believe that the individual is solely responsible for constructing the knowledge that he or she accumulates. So teacher should provide support for children to explore their world and discover knowledge.

Social constructivists approach, on the other hand places strong emphasis on collaboration with other to produce knowledge and understanding. Key ideas from Russian La Vygotsky stress on social constructivists origin, places, importance on languages and communication between people to acquire and store knowledge. Formal schooling is one cultural agent that determines adolescent's growth. A social constructivist's teacher should establish many opportunities for children to learn with the teacher and more skilled peers. While these take on constructivism differ in the origin of knowledge.

As both schools have different views and opinions regarding development of child to construct his or her own concepts but at the same time both schools are agreeing that a teacher play a key role in the education of a child as a facilitator and guide, not a director. In metaphysical club author Louis Mennared summarized what can be identified as constructivists thinking in the works of James, Pierce, Dewey and Oliver Wendell. If we strain out differences personal and philosophical, they had with one another, we can say that what their thinkers had in common was not a group of ideas, but a single idea on idea about ideas. They all believed that ideas are not out there waiting to be discovered but are tools like forks and knives and microchips that people devised to cope with the world in which they find themselves. They believed that ideas are produced not by individuals but by group of individuals that ideas are social. They believe that ideas do not develop according to some inner logic of their own, but are entirely dependent, like germ on their human carriers and the environment. Since ideas are provisional responses to particular and irreproducible circumstances, their survival depends not on their immutability but on their adaptability.

The main characteristics of constructivist's platform are following:

1. Learners constructs their own knowledge beginning with what they already know, exploring what needs to be known next and determining the purity and effectiveness of their pursuit through authentic assessment and application.
2. All learning begins in doubts about the validity of idea. The goal of doubt is the restoration of belief.
3. Learning takes place in the personal zone of cognitive development between what is already known, what is not known and what is desired to be known.

4. Learning is achieved best through a socially interactive process.
5. Learning is best achieved when the understanding is consistent with the stages of human development.
6. Learning is an experience based process of inquiring, discovering, exploring, doing and undergoing.
7. The process of coming to know is neither random nor eclectic. It has structure.
8. Learning proceeds in spiral fashion including laddering, scaffolding, weaning and dialogism.
9. Cognitive development occurs in a social cultural context. The social at millions of individual achievements and the interaction between the learner and adult as well as his/her peers in culturally valued activities.
10. The interaction process in coming to know needs to be guided by structural cognitive and affective taxonomies.

To speak of something as being philosophical sound implies that the view is characterized by three components metaphysical, epistemological and axiological. Metaphysics has to do with ontology and cosmology. Ontology has to do with basic nature of human kind and cosmology has to do with what is real. Epistemology has to do with knowledge what is it, axiology has to do with values why do human beings value what they value. In response to these characteristics' constructivism meets the test of having a defensible philosophical foundation.

METAPHYSICS OF CONSTRUCTIVISM

Human beings enter the world neither inherently good nor evil but rather neutral in genetic orientation, behaviorally active and with free will. As in 17th and 18th century religionists believed that human beings enter the world either inherently good or inherently evil and either with or without free will. So, we cannot categorize learner but need is to stress them or provide environment to construct their way of thinking towards concept construction.

EPISTEMOLOGY OF CONSTRUCTIVISM

Constructivists believe that while knowledge is conceptually based and has structure, it is not something that exists by divine grace, is inherent in nature or is transmitted pedantically from teacher to learner. Constructivists believe, as the aphorism asserts, that each learner discovers and constructs knowledge for self as the result of doing and interacting

experimentally with his or her own environment. Learning is a socially interactive process as opposed to a solitary pursuit along a predetermined path. Information and knowledge are not synonymous terms. To constructivists knowledge conveys the notion that the learner has information necessary to proceed further in the learning spiral. The learner has the capacity to comprehend the information to analyze it including comparing and contrasting it with previous information, to synthesize it with other information, to evaluate its worth and effectiveness and to apply it in real life. As a result of this cognitive development process the learner continues on his or her quest in becoming a knowing person.

AXIOLOGY OF CONSTRUCTIVISM

Constructivists believe that values are existential. Values emerge in the context of living and experiencing as opposed to having been divinely obtained or being inherent in nature. For constructivists values emerge through the social interaction of human beings as they engage in experience. Experience is an active process of doing and undergoing. Values have meaning in context. In platonic terms value held is a virtue and the virtuous person seek the greatest good for the greatest numbers. So constructivists provides a sound philosophy to guide the learner as per social needs in a way to constructs his or her own constructions for the concept irrespective of her origin but due to environmental changes around him and how to survive in that environment with his or her meaning for any concepts which can fulfill his needs in a better way.

CURRICULUM AND CREATING A BLUE PRINT FOR THE CONSTRUCTIVISTS CLASS ROOM

Because deep understanding develops in meaningful contexts that transcend disciplines, the curriculum in constructivist's classroom is generally interdisciplinary in nature. It provides opportunities for students to extend or constitute their thoughts through inquiry into big ideas organized around generating themes of study to match curriculum content with student's developmental abilities. These should be large enough for cooperating many perspectives and levels of participation, taking differences in learning styles and approaches into account by providing multiple entry prints for student involvement.

Main principles

1. Teacher is facilitator
2. Building of students interests and strength

BLUE PRINT FOR CONSTRUCTIVIST'S CLASSROOM

Bloom's taxonomy offers a promising approach for designing classroom experiences for student's experiences that promote critical thinking and constructivists approach to learning. With following characteristics

- Creating a learner centered classroom
- Forces on student learning
- A framework for knowledge construction

So a detailed blue print of student centered learning environment should be created to foster critical thinking and the process of knowledge construction. It becomes foundation for all future planning's at the cause, unit and individual lesson kits.

CONSTRUCTIVISM AND METHODS OF TEACHING

In constructivists teaching methods teachers and student become partner in learning who equally share the task and responsibility of sharing knowledge. So, teacher encourage student to take the knowledge that is shared between the teacher and student and make it their own.

The methods, which best meet the unique and changing needs of the student are following:

- Scaffolding
- Cognitive apprenticeship
- Cooperative learning
- Reciprocal teaching

Scaffolding:

Scaffolding provides a changing of the level of support over the course of a teaching session. Learner needs a great deal of support when a new concept is introduced but as students need and mastery over the subject increases the support and guidance from the teacher decreases to allow the student to explore further options in whatever way they choose. So the students need become the focus of the teacher's lesson plan. Learner attains the amount of instructions needed by him at that time.

Cognitive apprenticeship:

This method allows a teacher to stretch and support the student understanding of and use of the cultural skills. With this in mind, teacher often model strategies for adolescents and support efforts when they try to complete the task. After this is accomplished they further encourage adolescents to work independently. Teacher used the timings of the student participation in

discussion to infer student understanding of the lesson. Teacher allows pause to allow student to take responsibility for an idea by anticipating or completing the teacher's idea. Looks of the faces of learners and responding decide quality of their understanding.

Cooperative learning:

When using cooperative learning student often works in small groups to help each other learn. Cooperative learning can be especially effective in two conditions

- Group rewards are generated
- Individuals are held accountable

Teacher participation in cooperative learning is vital to ensure that the group receives the necessary advice and guidance to remain on a productive path.

Reciprocal teaching:

Teachers who use reciprocal teaching allow students to take turns leading a small group discussion and can also involve an adult and an adolescent. Teacher gradually assumes a less active role, letting the student assume more initiative. This helps student to learn and read more effectively. As teacher actively engage with the student and cooperatively contribute learners learn well.

ASSESSMENT:

To help turn identify students' strengths and interest, constructivists teacher use many kinds of assessment which help them to gain insight into students' different strategies for learning and to determine student progress and achievement. Documented observation of students as they make things, conduct research collaborating with others, skill inventories, checklists and developmental scales that provide them with the information portfolio collections of student's work are some strategies for assessment. Teacher may involve families of the students in commenting on and evaluating student work. These techniques are flexible enough to recognize and allow for different in the ways that students demonstrate knowledge.

SUMMARY

So constructivism best describes how different learning approaches affect the meaning making process. Specially it was designed to discover if active learning based on constructivists practices educational efficiency would be more than passive, teacher led instructions by providing students with 3D design tools and real time technology that facilitates interactive, kinesthetic, visual and auditory learning. The meaning making process of students would be

enhanced, learning to more complex knowledge constructions. Students create their own knowledge including the following constructivist's mantras:

- Learning is student centered
- Learning is an interactive process
- Learning begins in doubt
- Learning is the result of doing and undergoing experiences
- Learning is experience based
- Discovery learning
- Exploratory learning
- Participatory decision making
- The teacher as a facilitator of learning as opposed to a dispenser of knowledge.

REFERENCES

- NCERT (2005) National Curriculum Framework
- Karlin Berger (1971)) Experiential Learning, Parker Publication
- Santosh Sharma (2006) Constructivist approach to teaching and learning, NCERT
- Shveta Uppal (2007) The Reflective Teacher, NCERT
- Dr. Sagy Joh (2007) Constructivism and learner centered approach in Education, Edu Tracks, Vol-6, Neelkamal Publ. Pvt. Ltd.
- NCERT (2000) Document on National Curriculum Framework for school Education, January, 2000
- V. D. Bhatt (2006) Experiential Learning, Constructivists approach to teaching and learning, NCERT