

# Constructivistic Approach to Learning

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## **Abstract:**

**Constructivism is the study of construction of knowledge through personal experience and interaction with the outside world. The theory is based on the idea that knowledge is dynamic and is constructed in mind in multiple ways learning is based on previous knowledge and involves assimilation and accommodations. The learning Should be made constructivist based on a specific learning goal. The constructivist should be have authentic activities to present information real world best context which leads to construction of knowledge by the learner. The learner then collaborates through social navigation this method is student Centre rather than the traditional teacher centred. The teacher in this approach becomes the facilitator coach and motivator**

## **Introduction**

Some teachers take a great interest when their pupils offers an incorrect answer to a question. In such a situation these teachers proceed by asking pupils to explain how they arrived at that answer. It is likely that this teachers are operating from a constructivist perspective which sees learners as constructors of meaning. By investigating the Origins of a wrong answers the teacher can uncover the learners thinking processes, subsequently challenging and refining faulty mental constructs.

It is difficult to draw a clear distinction between constructivism and cognitive division because constructivism is a natural progression from cognitivism and both are interested in cognitive process. Cognitivism focuses on how information is processed whereas constructivism focus on what people do with information to develop knowledge. In particular, constructivism holds that people actively build knowledge and understanding by synthesizing the knowledge they already process with new information. For constructivist, learning is an active process through which learners construct new meaning.

Constructivism is the study of a Learner's on construction of knowledge. This knowledge is constructed through one's own personal experience and interaction with the outside world. The learner text in new information and gives meaning to it, using his or her on prior attitudes, believes and experiences as references. Learner is an active participant in the construction of knowledge while the instructor serves as a facilitator.

Constructivist see learners as being active rather than passive. Knowledge not received from outside or from someone else, rather, it is the individual learner's interpretation and processing of what is received through the sensor that create knowledge. The learner is the centre of learning with the instructor playing and advising and facilitating role. Learner should be allowed to construct knowledge rather than being given knowledge through instruction. Learning is making a way from one way instruction to construction and discovery of knowledge.

## **What is constructivism ?**

Constructivism is basically a Theory based on observation and scientific study about how people learn. It says that people construct their own understanding and knowledge of the world, through experiencing things and reflecting on those experiences. When we encounter something me. We have to reconcile it with our previous Idea and experiences, may be changing what we believe, aur maybe discarding the new information as irrelevant. In any case, we are active creators of our knowledge. To do this we must ask questions explore and assess what we know.

Constructivism is 'theory of learning' based on the idea that knowledge is constructed by knower based on mental activity.

## **Components of constructivism**

The following components comprise the theoretical framework of constructivism

- Mind is real : mental events are worthy of study :
- Knowledge resides in mind ;
- Knowledge is dynamic;
- Meaning is constructed;
- Reflection / obstruction is critical to becoming an expert;
- Learning includes constructing representations;
- Teaching is negotiating construction of meaning;
- Thinking and perception are inseparable; and
- Problem solving is Central to cognition.

## How constructivism impacts learning

Constructivist learning theory does not necessarily imply that one must follow a “constructivist” pedagogical strategy. In other words most researchers firmly believe that knowledge is constructed but some do not adopt an instructional design that is labelled “constructivist”.

Constructivist teaching strategy is based on the belief that student learn best when they gain knowledge through exploration and active learning. Hands on material are used instead of textbooks and students are encouraged to think and explain their reasoning instead of memorizing and reciting facts. Education is centred on themes and concepts and the connections between them rather than isolated information.

**Instruction:** Under the theory of constructivism, education focus on making connections between facts and fostering new understanding in students. Instructors tailor their teaching strategies to student responses and encourage students to analyze, interpret and predict information. Teachers also rely heavily on open ended questions and promote extensive dialogue among students.

**Assessment:** constructivism calls for the elimination of grades and standardized testing. Instead assessment becomes a part of the learning process so that students play a larger role in judging their own progress.

## Principles of constructive learning

Constructivism, a learning theory and informed by cognitive psychology educational research and neurological science, views learning as the product of experience and social discourse. Constructivist consider learning to be an individual and personal event. The following principles are based on the work of various constructivist theorists and are offered as a Framework for this discussion

Learners bring unique prior knowledge, experience and beliefs to a learning situation.

Learning is internally controlled and mediated  
Knowledge is constructed in multiple ways, through a variety of tools, resources, experiences, and contexts.

Learning is process of accommodation assimilation or rejection to construct new conceptual structures, meaningful representations or new mental models.

Learning is both an active and reflective process  
Social interaction introduces multiple perspective through reflection, collaboration, negotiation and shared meaning.

## Advantages of constructivist learning

The learner uses sensory input and does something with it ultimately making meaning of it.

Learning consists of both constructing meaning and constructing system of meaning. Learning is layered.

- Learning occurs in mind. Physically activity may be necessary but is not sufficient alone.
- Learning is a social activity.
- Learning takes time; it is not spontaneous. Learners go over information and ponder, practice or experiment with them.
- Knowledge is necessary for learning. It is the basis of structure and meaning making.
- The more we know, the more we can learn.

## **Principle of constructivist course design**

The main principles of constructivist course design are

1. Maintain a buffer between the learner and the potentially damaging effects of instructional practice.
2. Emphasize the affective domain, make instruction relevant to the learner, help learners develop attitudes and beliefs that will support both present learning and lifelong learning and balance teacher control with personal autonomy in the learning environment.
3. Provide context for both autonomous learning and learning with relationship to other student group discussion, project collaboration as well as independent learning.
4. Provides seasons for learning within the learning activities themselves. Have students identify relevance and purpose.
5. Promote the skills and attitudes that enable a learner to assume responsibility for his/her cognitive and developmental process.
6. Use the strategy exploration of areas to strengthen the learners involvement with intentional learning process and self feedback.

## **Constructivist learning environments (CLEs)**

Jonassen has proposed a model for developing constructivist learning environment around a specific learning goal. This goal may take one of several forms from least to most complex

- Questions or issue
- Case study
- Long term project
- Problem

In constructivist learning environments, learning is driven by the problem to be solved; students learn content and theory in order to solve the problem. This is different from traditional objective based teaching where their theory would be

presented first and problems should be used afterwards to practice theory. Depending on students prior experiences, related cases and scaffolding may be necessary for support. Instructors also need to provide an authentic context for task and information resources, cognitive and collaborative tools.

## **Components of constructivist learning environments :**

There are three components for constructivist learning environments.

1. Context
2. Construction
3. Collaboration

Interactive learning environments have the following qualities:-

Authentic activities:

Presenting authentic task and conceptualize rather abstract information and provide real world case based context , rather than predetermined instructional sequences.

### **Construction :**

Learners should be constructing artefact's and sharing them with their community.

### **Collaboration :**

To support and collaborate construction of knowledge through social negotiation, as opposed to compare competition among learner for recognition .

### **Reflection :**

Fostering reflective practice :

**Situating** the context : enable context and content dependent knowledge construction;

### **Multi model interaction -**

Providing multiple representations of reality, representing natural complexity of the real world.

### **Conclusion :**

Constructivist approaches, in contrast are regarded as producing greater internalization and deeper understanding than traditional method. From the educational perspectives as learners, producing and constructing their personal knowledge. The learner environment changes completely in the new paradigm to one that is more student-centered. The teacher become facilitator, coach, motivator not demagogue you or the gate-keeper of all knowledge.

Advocate of constructivist approach suggest that educator's first considered the knowledge and experience student bring with them to learning task . The school curriculum then be built so that students can expand and develop this knowledge and

experience by connecting them to new learning students improve their critical thinking and problem solving skills when they construct new knowledge based on background experiences and multiple resources.

### **References**

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**“Strong minds discuss ideas,  
average minds discuss events, weak  
minds discuss people.”**