

Constructivist Learning and Teaching



The philosophy behind constructivist pedagogies is that humans can understand only what they have themselves constructed. A cross-disciplinary nature of constructivism has facilitated the development of various branches of learning and teaching theories. The general concept that **AClass** maintains for constructive pedagogies is the effort to identify “learner” as an important agent in the learning process, their interest and characteristics are taken into consideration, and learning should build on prior knowledge so learners understand how to construct new knowledge from authentic experience, to support active participation and engaged learning. Constructivist learning is to make learning meaningful to learners and to eliminate the struggle of learners with the power of teacher and knowledge.

Constructivist learning and teaching perspective represents a shift from viewing learners as responding to external stimuli to seeing learners as “active in constructing their own knowledge;” they assert that “social interactions are important in knowledge construction” (Bruning, Schraw, Norby, & Ronning, 2004). In constructivist perspectives, learners directly develop knowledge by experiencing things and by reflecting on such experiences. Learners can actively learn through cognitive processes, constructing an understanding of

the world around them. Educators such as Piaget, Vygotsky, and Bruner contribute to theories of constructivist learning.

Constructivism is best understood in terms of how individuals use information, resources, and help from others to build and improve their mental models and their problem solving strategies (Woolfolk, 2007). The constructivist model of teaching enables learners to construct knowledge, whether this construction reflects objective realities, or the construction is perceived to sharpen one's cognitive development for acquiring higher-level intellectual development, or the construction of knowledge should happen in a social interactive setting with the mediation of individuals. There is no specific constructivist pedagogy, but we can conclude the principles that guide the development of constructivist pedagogies, by comparing it with traditional behaviourist perspective of teaching.



<i>Constructivist Pedagogies vs. Traditional Pedagogies</i>		
Dimensions/Approaches	Constructivist Learning	Traditional Learning
<i>Nature of learner</i>	Sees learners as unique individuals; the unique nature of learners is an integral part of the learning process	Sees learners as homogenous mass defined by chronological age upon which learning targets and materials are designed in the curriculum; learners are expected to meet the nominal standard
<i>Responsibility for learning</i>	Resides with the learner; emphasizes the active role of learners in the learning process in looking for meaning	Rests with the teacher; learner is passive and receptive; learners present what they learn from teachers
<i>Learning motivation</i>	Develops learners' motivation through authentic experiences in handling problems; by gaining success, learners gain confidence and motivation to embark on more complex challenges; intrinsic	Learners' behaviors are reinforced by praises and rewards; learners increase motivation by conforming to standards and expected achievements; extrinsic
<i>Role of Teacher</i>	Usually asks, supports, provides guidelines, and creates environment for learners to arrive at their own conclusions; continuous dialogue with learners; teacher should challenge learners	Often gives instructions from the front; gives answers and expects learners to be disciplined in receiving the content of the curriculum with the least distraction and disturbances; learners are under control in the learning process
<i>Interaction</i>	Teachers and learners learn from each other; learners compare their version of truth with that of teachers and peers to arrive at a socially tested/socially negotiated version of truth; learning task is the interface between teachers and learners, both should develop awareness of each other's viewpoints and should look at their own standards and values	The learning experience is objective; learners receive truth and knowledge from teachers through given tasks; the teacher is an expert who gives expert advice and instruction to get learners gain knowledge efficiently
<i>Collaboration</i>	Learners collaborate to arrive at a shared understanding of truth in a specific field; through "scaffolding," learners can extend beyond the limitation of physical maturation to the extent that the development process lags behind the learning process	Learners should be attentive and disciplined to achieve the content set in the curriculum; they should try hard to fulfill expectations from teachers; students seek advice from teachers in their study

<i>Context</i>	Sees the context in which learning occurs as central to learning; learning is directly relevant to application; it acculturates students into authentic and complex practices through activities and social interaction	Knowledge is de-contextualized; it may not give learners skills to understand authentic tasks; learning occurs when outcomes are measured
<i>Assessment</i>	A two-way process involving interaction between teachers and learners; inextricably linked with the learning process to find out learning achievements and quality of learning experiences; courseware; share possible ways in which learner's performance may be improved	A process carried out by the teacher; a separate process of measuring how much learners have gained and how far learners have reached at the end of the learning process

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One of the popular constructivist pedagogies is named "scaffolding". It is a technique whereby the teacher models the desired learning strategy or task, then gradually shifts responsibility to the students. The metacognition in problem solving are quite similar to a scaffolding teaching approach, which the teacher conceptualizes how the learners can be guided to use skills and develop strategies to learn, they offer assistance based on the ability, insufficiency and inexperienced condition of the learner, and little by little, seeing the progress of the learners, the teacher signals the learners to take full responsibility in their work. Scaffolding activities can be very useful in learning. For experts, they used to make use of prior knowledge to solve a problem which is unfamiliar to them. They may think of a similar but simpler situation, and manage their own self regulating mechanism which enables themselves to grasp new skills and knowledge gradually and finally they can handle the new task satisfactorily. Scaffolding support that is commonly used by trainers and teachers include modelling, coaching, contextual support, asking "leading questions", giving away parts of the solution. Some common examples of scaffolding strategies can be found below:

<i>Examples of Scaffolding Strategies</i>	
Scaffolding Methods	Examples
Questioning	It is commonly used in solving abstract or conceptual problems after exploring and practicing basic levels of understanding. For example, in reviewing what children are doing in their social and personal lives, teachers ask children critical questions, such as "what do you think is the meaning of a society?" to push their thinking beyond their limits.
Role playing and demonstration	Show students the process by which skills and concepts are applied by highlighting critical features that easily fail learners. For example, an art teacher demonstrates how eye-hand coordination can enhance one's skills in modelling and creative production of a ceramic art
Hints and examples	Give cues, hints, or guides at critical points to enhance learners' self-inquiry and self-discovery
Instruction	Prepare guided task instructions to address the different domains of understanding within a specific topic.
Graded assignments/materials adaptation	Prepare exercises that fit the individual interests and needs of learners, or design exercises that accomodates the interest and academic levels so that learners can handle the basic level and move on to the more advanced level of the subject
Self-assessment and peer assessment	Ask learners to assess their own learning outcomes and to conduct peer assessment to develop understanding-based criteria

References:

Bruning, R., Schraw, G., Norby, M., & Ronning, R. (2004). *Cognitive psychology and instruction*. Upper Saddle River, NJ: Prentice Hall.

Woolfolk, A. (2007). *Educational Psychology*. Boston: Pearson Education.

