



KNOWLEDGE CONSTRUCTIVISM: THE FUNDAMENTAL APPROACH TOWARDS STUDENT'S DEVELOPMENT

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ABSTRACT

The concept of 'Knowledge Constructivism' has recently been established as the most important philosophical viewpoint in the teaching-learning process. New knowledge is learned by past knowledge or experiences that students or children gain from many day-to-day situations in which they grow up in society and family, according to the current philosophical point of view of 'knowledge constructivism.' This method has led to the development of the idea of 'knowledge constructivism.' Because what he or she builds is founded on previous experiences and information, the learner has been regarded as a soul resource for the production of new knowledge. The topic of 'knowledge constructivism' could be investigated as a different aspect of a student's psychology. Knowledge constructivism is the essential approach to student development that every teacher must cultivate during the teaching-learning process, as it has been examined and stated that no child is born without basic knowledge or past experience. The conclusion is 'every student can construct their knowledge with prior knowledge and experiences.

Keywords: Knowledge constructivism, teaching-learning, learner, student, psychology, student development, etc.

INTRODUCTION

What is 'Knowledge Constructivism'?

'Knowledge Constructivism' is 'an approach to learning that holds that people actively construct or make their knowledge and that reality is determined by the experiences of the learner'. (Elliott et al., 2000, p.256).

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'Constructivism' is a learning theory with philosophical and psychological roots. Constructivism's central tenet is that students actively construct their own knowledge and meaning. (Steffe & Gale, 1995; Fosnot, 1996). The constructivism approach was incorporated into the National Curriculum Framework 2005/2010.

These are some of the objectives considered in the philosophical theory of 'Knowledge Constructivism.'

1. Linking social life and school education.
2. Flexibility in the examination and evaluation process.
3. Extending the curriculum's strength beyond textbooks and academic curricula.
4. Emphasizing the significance of comparative studies to students.
5. Achieve the aims and objectives of the curriculum.
6. Enabling students to effectively and confidently face and accept challenges.
7. Increasing the students' creativity.
8. Motivating the students to participate in activity-based learning enables them to increase their self-esteem and confidence.
9. Assist students in honing their fundamental skills.
10. Enable the students to enhance their thinking ability.

Different definitions have been given to the notion of "constructivism" by different thinkers, depending on their perspective on today's educational philosophy. The "constructivist" approach to education's main goal is to provide students plenty of opportunities to use their imagination and creativity. This theory's core strategy is to take into account pupils' prior knowledge and experience while bringing them into the principal or prime flow of education. Traditional techniques of reading and writing cannot promote the development of students or learners; rather, the teacher's 'knowledge constructivist approach' can disclose the gateway to the students' hidden knowledge in sub-consciousness. The teacher's approach should be predetermined and thorough, assuming that the learner participates in the teaching-learning process with prior knowledge and experience. Furthermore, it should not be assumed that the students or learners have empty heads or cipher intelligence.

'Knowledge constructivism' is not only a philosophical agenda for knowledge production, but it is also a key idea that should really be stimulated in today's classroom context. In the philosophical theory of constructivism, on the other hand, it should be emphasized that every learner has a distinctive life experience; therefore the technique of constructing or assimilating new information may change at the individual level. Changes in the teaching-learning process should be undertaken in order to meet the changing needs of society and individuals. The teacher should not adhere to chalk, blackboard, and textbooks in the classroom; instead, a number of different projects, experiments, word puzzles, role play,

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presentations on various basic technological topics, activity-based learning, and so on, should be at the centre of the teaching-learning process, and only then will the philosophical theory of education known as 'knowledge constructivism' be identified.

Every component and action found in nature has a unique background. The changes that occur in nature are influenced by that background. The same principle of change applies to the learner's or student's learning process, as emphasized in constructivism. It has been noticed and discovered that the ideas of "prudentalism" and "rationalism" have been considered in the development of the "constructivist" approach. Rationalism believes that human beings have an innate intellect. Observation skills have developed gradually since childhood, based on the fact that every human goes through various kinds of experiences at every stage of self-development. The theory of logic has been given importance in "knowledge constructivism". While dealing with students, the teacher has to think about the students' ability of logical reasoning. According to Jansen's idea of "knowledge constructivism," students construct knowledge based on mental processes.

In the traditional education system, the teacher is expected to prepare the content with evaluation rubrics, and teach with effective blackboard writing, but the approach of knowledge constructivism helps teachers to give justice to the dormant skills of the students. The teacher has to put in the effort to utilize the imagination power with the help of the innate intelligence of the students, as this will help the students develop rapidly. According to education experts, "knowledge constructivism" and "problem-based learning" are both sides of the same coin, where the student tries to acquire knowledge and solve problems based on pre-experience and innate skills through which he or she can develop analytical and observational skills. The process of knowledge acquisition has been critically examined in the current educational philosophy of "knowledge constructivism," along with the epistemology of education, which has been given equal weight. What is the origin of knowledge and wisdom? What is the nature of knowledge? What is the process of acquiring knowledge? The approach of "knowledge constructivism" would provide solutions to all of these concerns.

In particular, there are two major approaches considered in gaining knowledge. The first is the objectivism approach, and the second is the knowledge constructivism approach. According to knowledge, the concept of objectivism does not accept constructivism. The concept of constructivism has been developed through cognitive psychology. The Swiss psychologist "Jean Piaget" introduced the rationale for cognitive development through his cognitive psychology, which is considered integral to knowledge constructivism. In his famous book "The Process of Education," American educationist and great psychologist Jerome Bruner wrote about the importance of constructivism. He has highlighted the major three types of constructivism, namely: cognitive constructivism, social constructivism, and radical constructivism. In "cognitive constructivism," the method of absorbing knowledge is

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directly connected to the thinking process of a learner. The second is social constructivism, in which it is said that a learner acquires knowledge through the languages spoken in a society and the social interactions. The third is "radical constructivism," which is defined as the self-organizing intellectual process of the human brain. Ernst von Glasersfeld was the pioneer of radical constructivism.

Characteristics of 'Knowledge Constructivism':

1. Learning in "knowledge constructivism" teaching methods is an active process where the learners acquire the knowledge on their own, in which the creation of knowledge is not static but dynamic.
2. In the constructivist approach to learning, the student studies by constructing their own knowledge based on prior knowledge and previous experience.
3. The student constructs the new concepts on his own.
4. Social, linguistic, and cultural interactions benefit students in creating new knowledge.
5. The local environment, surroundings, and social conditions play a major role in the process of the construction of new knowledge.

The Execution of Constructivist Approach:

It is said that while utilizing any theory or philosophy in practice, our approach should be broad and positive as well. The approach is nothing but our thoughts, positive or negative opinions about something that we experience or see. The constructivist approach is very helpful in developing and honing the basic skills amongst students. Every teacher has to implement this approach in the teaching-learning process. This approach should be adopted in today's scenario to make the teaching easy and outcome-based. The implementation of the theory of "knowledge constructivism" in education is a precipitous break from the approach of "behavioral theory". In behavioral theory, it was assumed that the intellectual level of every child is the same, and on the contrary, the approach of constructivism was introduced, wherein it is said that every individual has a different intelligent level on the basis of which he or she creates knowledge on his or her own. Education is a continuous and changing process in which the teacher must make changes in the process of imparting knowledge to the students in order to ensure their individual development. If the changes happened accordingly, it would be easy for learners or students to make social as well as educational adjustments accordingly. While approaching "knowledge constructivism", the teacher has to think about the learner's economic, social, and cultural background because all of them have a

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positive or negative impact on the personal growth of the learner, directly or indirectly. The teacher has to think about the following things while adopting the approach of constructivism.

1. The teacher has to think about the multidimensional thought process and intellectual level of the students while preparing the content to be taught in class.
2. Modifications to classroom instruction as needed
3. Assist students in honing their sense of curiosity and observation.
4. Make necessary changes to the school's structure.
5. Emphasis on solving students' problems on an individual level without adopting a collective learning-teaching process.
6. Students should not be categorized as "smart learners" or "poor learners" during ongoing class.
7. Rather than attempting to bring such a student into an active flow, a controversial comparison of the passive learner with an active learner should not be attempted. All the above-mentioned things play a vital role in the individual growth of the student.

The Approach of Constructivism and the Learning Process:

Most of the time, it is found that the teacher uses the typical classroom teaching method to teach the content. Instead of using this strategy, the teacher must consider the students' individual and unique differences. New teaching and learning techniques have been introduced in the "constructivism" philosophy, through which learners can gain knowledge more quickly than in the traditional way of teaching and learning.

Project-Based Learning (PBL):

The teacher should ask pupils to think of their immediate surroundings and assist them in selecting a project topic. They must also examine all facets of the subject. In the present method of learning, students use their skills to develop their own analytical abilities, which help them understand and develop the technique of how to use different types of intelligence.

Problem-Based Learning: (PBL)



In this technique of learning, the learner is given specific content-related problems to investigate thoroughly. This form of learning method instills observation skills, pre-knowledge augmentation, problem-solving tactics, attentive intelligence, conflict resolution style, and so on, and the learner progresses toward multifaceted personality development. With this method of learning, the students can use their logical abilities to find a solution, and their reasoning abilities can also improve. Sometimes learners locate the responses in a group setting, while other times they do it on an individual basis.

Discovery-Based Learning:

It is expected that teachers should allocate some questionnaires to the students and ask them to discover the answer so that they will get the exposure to enhance the research-oriented attitude, which is a major objective of the present learning methodology. Due to this technique, the curiosity of the students encourages them to find something innovative as a solution to the problem. Overall, the research attitude can be nurtured through this method of constructing knowledge.

Inquiry-Based Learning:

In the traditional education system, the teacher allows a student to raise their doubts during the learning process, but on the contrary, the technique that is expected in knowledge constructivism is that a learner has to create it by himself and resolve it with the help of a teacher. A student has to get the required answers by himself. Through the present technique of learning, students can understand about How to ask the question? Which question has to be asked? How to inquire? Based on the received responses, what changes should be made in the techniques of an inquiry? Etc. Due to this method, meditation becomes a habitual part of the learning process.

Case-Based Learning:

In the present learning method, students are asked to think about and conduct an investigation into multiple incidents that happened in the surrounding area, specific people, and some of the specific cases to learn more about and apply the specific cases. In this method, the facts of incidents are reviewed. What is the sequence of incidents? What are the involved components in the particular incidents? This method of learning is used to conclude the incident by finding out the reasons behind it. The reference and support of pre-knowledge are taken to learn more about the case or incident, and new knowledge is constructed at its best. It has become necessary, in light of the changing scenario of the education system, policies, and different methodologies, to use all of the above-mentioned learning techniques to make education effective and outcome-based. It has been studied and observed that the Indian

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education system has an influence on the behavioral theory of education, wherein it is defined that the expected changes in a learner's behavior mean education. Individual differences were not considered in the behavioral theory of education, which is at the centre of the constructivist approach. The developmental stage of a learner, age group, and social and psychological needs were not taken into consideration in the behavioral theory of education. All of these aspects are at the heart of the "knowledge constructivism" approach, which is critical in the multidimensional development of a learner.

The Importance of the 'Knowledge Constructivism' Approach:

The knowledge constructivism approach is essential not only for educating a learner through a channel of education, but also for the comprehensive development that is expected through this point of view. If a teacher fosters this approach, it helps the teacher to think differently. The role of the teacher does not remain limited as a teacher; rather, the teacher becomes a guide, observer, examiner, counselor, mentor, and director. The importance of the same approach is explained as follows.

Development of Problem-Solving Skills

The learner has to be given the different problems based on the content, and a teacher has to play the role of a counselor in the learning process. The student will attempt to solve the problem based on his or her own understanding, which will boost his or her confidence level and student won't get scared of the problem or feel an inferiority complex at all.

Development of Decision-making Skills

In particular, school students cannot take some of the decisions on their own, but through the approach of knowledge constructivism in diversified learning methods, the learner gets the techniques of decision making that enable the learner to hone the decision-making skills through further methods, i.e., project-based learning, problem-based learning, case-based learning, etc.

Development of Multidimensional Thinking Skills

In the traditional approach, it is observed that a learner thinks in a single, simpler, and more elementary way. The student is studying inside of a box traditionally, whereas in the constructivist approach it is denied and out-of-box thinking is nurtured amongst the students so that they can learn the content in all its aspects.

Development of Innovative Skills and Research Aptitude

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School students are very fond of innovations. They liked it from the beginning of their schooling. They are also capable of conducting research. But the development of the same aptitude is based on the techniques that the teacher uses in classroom teaching. While adopting the approach of constructivism, the teacher has to use such a technique in teaching to get introduced to the innate skills of the students, on the basis of which the teacher can judge the research aptitude of the students.

Development of Various Values

Value education has been a part of traditional education since a long time ago, which is being taught in a single-way teaching process. The importance of values is expected to be introduced through various social and educational activities such as various cultural programs and role-playing activities, one-act plays, dramatic presentations, etc., which make it very easy to understand the values.

In-depth Introduction of Core Educational Components

By executing the attitude of knowledge constructivism, it seems easy to introduce students to the core educational components. Due to which the scientific approach will be enhanced, awareness about environmental protection will be created, parity, democracy, and secularism will also be cultivated, helping the students to coordinate their intellect, emotions, and actions appropriately. It would be more appropriate and supportive to introduce such core components through activity-based learning.

Development of Life Skills

In the method of knowledge constructivism, more emphasis is placed on activity-based learning that helps in making students efficient and active. In the process of individual development, the student has to get acquainted with self-skills and abilities through which self-esteem, empathy, decision-making, effective communication, creative thinking, deep thinking, emotional adjustment, etc. can be achieved through this approach.

Development of Imagination Power

It is partially possible to provide an opportunity to stimulate the imagination power of the students if the teacher is more frequently blackboard, chalk, and textbook oriented in classroom teaching. But the constructivist approach enables students to hone their imaginative powers. The aims can be achieved through scientific experiments, sustainability from waste, wall posters, etc., activity-based projects that may give exposure to the

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imagination power of the students. The role of a teacher will be changed to that of a guide, mentor, or counselor as well.

Assistance in Educational and Social Adjustment

The creation of new knowledge and technological methods in society is seen to be due to the explosion of knowledge that is being added to every second. Accordingly, the flow of education should be changed as per the new normal. The student should not be only school-oriented; rather, he or she must be socially oriented. The learner should be helped by the teacher in social and educational adjustment. If the teacher incubates a constructivist approach, it will be easier to cope with economic and social adjustment.

Morale Development

It has been observed that students compare themselves with each other during school. Due to this comparative approach, some of the students become victims of inferiority complexes, which cause negative emotions amongst the students, and it impacts learning strategies directly or indirectly. The constructivist approach helps to reduce the inferiority complex and fear as well. The teacher helps students individually and, due to this, students can cope with educational adjustments easily. The student solves the problem on the basis of prior knowledge. Students acquire knowledge as per their intellect.

CONCLUSION

To instil an analytical mindset and to improve observation skills and competency, the family and society must be free of the most vexing impediments. Although the theory of constructivism is accepted as a new concept or educational philosophy, the various kinds of intelligence such as linguistic or verbal intelligence, logical or mathematical intelligence, musical intelligence, spatial intelligence, interpersonal intelligence, etc. should be taken into account before applying such an approach in the teaching-learning process. Substitute is a need for time, and accordingly, the changes are anticipated in the flow of the education system. It must be derived from the traditional approaches. By taking into account the changes, the theory of knowledge constructivism was introduced in the National Curriculum Framework in 2005 and 2010. The multi-dimensional development of the learner was the core objective of the present theory.

The theory was introduced and implied to make education stress-free, emotionally secure, and activity-based. The constructivist teacher can be different from the teacher who is a follower of the behavioral approach, where the role of the constructivist teacher does not limit itself to the teacher only. The student should be a free learner, with different groups of

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students for collaborative learning; activities such as think-pair-share, to instill the approach of effective interpersonal communication, and so on; activities should be conducted in a classroom setting, and these are major constructivist objectives. The constructivist approach is to be student-centered rather than education-centric. On the other hand, although the constructivist approach is effective, there are some limitations, such as the fact that not all the students have the same social, economic, and cultural background. It would be wrong to assume that each student will make the same and proper adjustments according to the situation or will participate in all the activities with the same approach. The teacher can't deny the possibility that all these backgrounds will have a negative impact on the thoughts or behavior of a learner.

Participation and non-participation can be mediated by adding a holistic ideology to constructivism, and the students' participation can be taken, because constructivism states that man is learning and constructing knowledge in which he thinks of his past experiences and pre-knowledge. Therefore, it would not be an exaggeration to say that the knowledge construction approach is an important ideology of student development.

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