Experiential Learning

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Abstract

This study focuses on the need of "Experiential learning" in school learning process and its long- term benefits. Experiential Learning enhances the practical application of the knowledge and skill to develop competence. It can be effectively used in school learning, higher education, and other areas of educational learning. It shifts the child from rote learning to learning by doing and through illustrative experiences. This is very important in view of the demands of the present situation and the future in the wake of changes due to technological and research revolution in the field of robotics, artificial intelligence, virtual reality etc. In order to live up to these demands and changes, the Union Cabinet of Indian Government has approved the New Education Policy (NEP) on 29th July 2020. NEP focuses on Experiential Learning methods which will enhance the learning by doing, abolish rote learning methods and minimize the fear of examinations from the minds of learners.

Kolb's experiential learning cycle, though explains the different stages of learning in students, but it is silent on how to provide concrete experiential learning based on the type of content especially in school curriculum. The New Experiential Learning Model, that is "Content Based Experiential Learning Model" (CBELM) well explains how to give content-based experiences to learners at the school level and how to teach various projectable and non-projectable topics. Due to its futuristic approach and providing various experiences i.e., concrete and illustrative based on the content of the different subjects, CBELM is strongly recommended in the school learning process.

Key Words: Traditional Classroom Teaching, Experiential Learning, New Education Policy (NEP), Kolb's Experiential Learning, Content Based Experiential Learning Model, Concrete, Illustrative Experience.

Introduction

Experiential learning can be explained as a process of learning through experiences or learning by doing. It discourages rote learning and enables students to enhance their skills and competence. It involves accepting challenges, then reflecting on experiences and applying those experiences for growth and learning. As the saying goes, learners retain 75% of what they do, compared to 5% of what they hear or 10% of what they read. It has utmost importance in the present demand of the technological revolution in the field of robotics, artificial intelligence, virtual reality etc., and also research and development in these areas.

Need of Experiential Learning in Traditional Classroom

In India and many other countries, most of the educational institutes follow traditional classroom teaching. Transformation of knowledge stops in traditional classroom teaching once the teacher stops teaching. So we can say that traditional classroom teaching is more teacher centered. This encourages more rote learning and cramming of subject rather than developing learners' senses towards skills and real experiences.

By incorporating experiential learning into school curriculum learning, we can make students reflect better and to connect effectively with the content learned in the classroom to real-world situations.

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In the developing and under- developed countries, very less number of students opt for research work as compared to the universities of advanced countries. So, to increase opportunities of research and development for them, active learning should be involved in classroom teaching where students will take central role in their own learning. They can become more creative and can be inventors and discoverers.

As students engage in hands-on tasks, they will find some approaches work better than others. They discard the methods that don not work, but the act of trying something and then abandoning it – ordinarily considered a "mistake" – becomes a valuable part of the learning process. Students will learn not to fear mistakes, but to value them. Playing an active role in the learning process can lead to students experiencing greater gratification in learning.

A Brief History

The proof of experiential learning can be traced from ancient times. "Aristotle", the Greek philosopher wrote in his book that "we learn things by doing them". This clearly shows that the concept of experiential learning was there in ancient times. "Gurukuls" existed in ancient India and teaching through "experiential learning" was prevalent there. Students in Gurukuls used to learn by getting direct and indirect experiences on a daily basis. In mythology also there are many examples of experiential learning and one such example is the story of "*Eklavya*" when he learnt archery by watching the actions of Guru Dronacharya - a clear example of illustrative experience.

Clinical psychologist, Jean Piaget, rightly quoted that "Goal of schools should be to create persons who can do new things, can invent, discover and create new things rather than just doing things what generations have done in the past."

Strengths of Experiential Learning

Experiential learning has many significant benefits:

- It shows the direction to the learners. Learners learn by watching the actions being performed before them and then reflecting upon the experience.
- It provides experiences beyond the classroom. The learners can perform or repeat the learnt content away from the classroom also.
- It focuses on the learning process for the individual. To know about animals, for example, it is better to visit zoos rather than reading about them or just seeing the pictures.
- This helps in making discoveries and getting knowledge first-hand rather than just hearing/ following others' experiences.
- As learning through experiences is self-learnt, it is lasting in nature and can be applied for advance-level learning.

New Education Policy (NEP) And Experiential Learning

The Union Cabinet of Indian Government approved the New Education Policy-2020 (NEP) on 29th July 2020. According to this policy the curriculum of the school in our country will be changed from 10+2 to

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5+3+3+4. The Indian government approved the New Education Policy in 2021. In the new education policy, the format of 10 + 2 has been completely abolished. Till now the school curriculum in our country runs according to 10 + 2 but now it will be according to 5+ 3+ 3+ 4. This means that one part of pre-primary classes, then second phase of primary classes, followed by 3 years of middle classes and the last from the 9th to the 12th. The policy recommends that experiential learning should be provided at each stage of school education. Till now sporadic attempts could be seen in some selected schools, but elsewhere the same old techniques are still in vogue. These sporadic attempts are made by some teachers by virtue of their own experiences or on the basis of some knowledge gathered from the literature of some western educationists.

Kolb's Experiential Learning Theory

"Learning is the process whereby knowledge is created through the transformation of experience"

Kolb's Experiential Learning Theory (ELT) is a learning theory developed by David A. Kolb, who published his model in 1984.

The theory presents a way of structuring a session or a whole course using a learning cycle. The different stages of the cycle are associated with distinct learning styles.

Kolb's Experiential Learning Model

Kolb's Experiential Learning Theory works on a four-stage cycle of learning.

Kolb's Learning Cycle (Figure 1) is based on the Jean Piaget's focus on the fact that learners create knowledge through interactions with the environment.

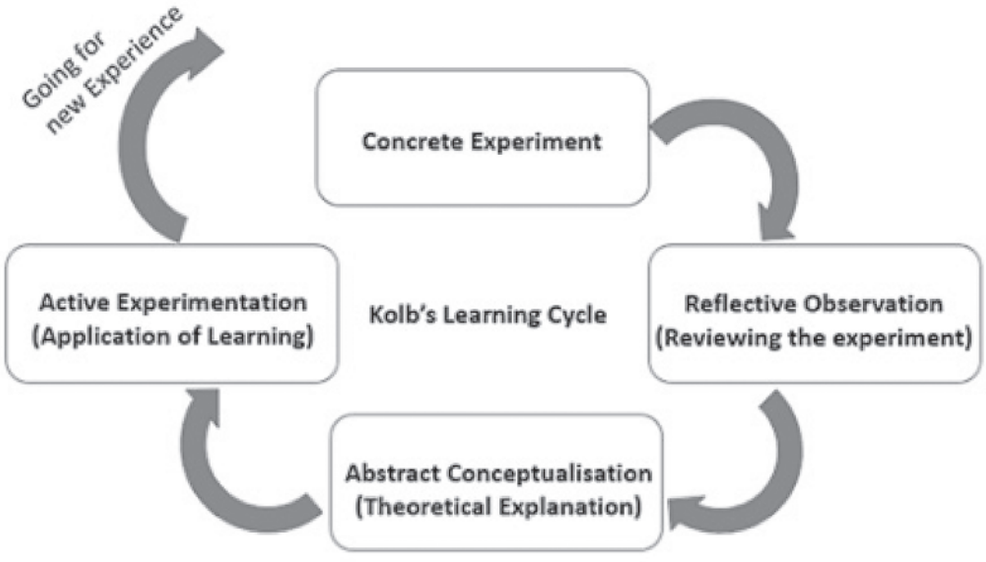


Figure 1

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1. Concrete Experience: Kolb's learning process cycle begins with a concrete experience. In a concrete experience, each learner engages himself/herself in an activity or task. Since student is engaged in active experience, the likelihood is that effective learning takes place.

2. Reflective Observation: After engaging in the concrete experience, the learner steps back to reflect on the task. This stage in the learning cycle allows the learner to ask questions and discuss the experience with others. It amounts to looking back at how the experience took place and this is a sort of looking back at the process of gaining experience.

3. Abstract Conceptualization: This is the stage when the learner is in a position to explain the content/activity learnt theoretically. He/she can comprehend any question relating to the content/activity learnt. This may be similar to the narration of the story or any part of the story of a movie or play that a person happens to see in a theatre.

4. Active Experimentation: Learners return to participating in a task, this time with the goal of applying their conclusions to new experiences. They are able to make predictions, analyze tasks, and make plans for the acquired knowledge in the future.

Limitations of Kolb's Experiential Learning

Although Kolb's learning techniques provide all round development and create skills in specific areas, but it has not focused on the concept of concrete experience. If it implies laying hands on experience, then how the concrete experiences should be provided for the abstract concepts, like beauty, truth, anger, etc. It is unable to explain how to give Content Based Experiential Learning, that is, how to create learning experiences for the different types of contents, i.e. the non-projectable and the projectable ones.

Secondly, it shows the learning cycle which closes at one point. Actually, it should have been spiral-shaped, as the content learnt at the completion of the cycle is continued for learning the related higher level concepts. The scope of learning new avenues or new thought process becomes feeble in this case. However, Kolb does say that learning gained through concrete experiences can be applied for learning higher level of concepts.

Content Based Experiential Learning Model (CBELM)

Depending upon the nature of subjects, school students of different classes come across different types of course-contents. Sometimes they are absorbed in learning non-projectable activities and abstract concepts. Experiential Learning may be conveniently provided for practical-oriented topics, but the problem arises when teachers have to transact the contents of theoretical nature. An attempt has been made to develop a model that can provide experiential learning in communicating different types of contents.

This model has been designated as "Content-based Experiential Learning Model (CBELM)". This model was developed by Bhatia and Joshi (2021)

According to this model, Experiential Learning may be interpreted in two broad categories:

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A) Laying Hands on experiences: Experiential Learning provided by laying hand on experience, i.e., through Project Method under which one learns by doing.

B) Illustrative experiences: The other category is by providing experience through illustrative means, viz. through suitable examples accessible to the learner, role plays, animated or still videos, sensory experiences, etc.

This model has been designed to provide the need-based experience to the learners as per the need of the situation.

Stages of CBELM

I. Assessing the Background Knowledge – The teacher is expected to know the learner's background knowledge relating to the topic that he/she may already be knowing it, or it may be ascertained by asking a few entry-level questions.

Questions Tagged

After this phase, the learner should be able to answer the following questions:

- Did your teacher ask some questions before you entered the experiential learning stage?
- Could you answer all the questions, if not which question/s you could not answer?
- Was your knowledge updated before you were allowed to enter the experiential phase?

II. Providing Relevant Experience – All the communicable content cannot be transacted through 'having hands on experience'. All the non-projectable topics may require different types of experiences, like showing real objects, models, videos, etc.

Questions Tagged

- Which type of experience did you have for learning the topic?
- Was this experience relevant?
- Did you come across any difficulty during the experiential stage?
- What did you learn through this experience?

III. Learner's Role during Experiential Phase – Whatever experiential learning source has been determined for the learner; he/ she uses it for learning the content.

Questions Tagged

*Which topic did you learn through the experiential source?

- What all did you do to learn this topic?
- What was the role of your teacher during your learning phase?

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IV. Reviewing the Learning – At this phase, the learner just reflects and reviews what he/she has learnt. This is the stage of contemplation and self-assessment.

Questions Tagged

- Can you recall step by step how you learnt the topic?
- Did you get stuck up at any stage of learning? If yes, how was it resolved?
- Do you accept the validity of the source of experiential learning used for you ?
- Are you fully satisfied with your learning?

V. Opening up of Further Avenues of Learning – After the desired content has been learnt, the learner develops confidence and is determined to use it for further learning of the related topics.The facilitator then, determines the topics to be transacted and envisages the further sources of experiential learning for the learner. The experiential knowledge, so gained, can be applied in new situations.

Questions Tagged

- Can you confidently explain what you have learned?
- Will you be able to apply the newly gained knowledge in new situations?
- Can you name a new situation where you will be able to apply the knowledge gained by this model?

CBELM has been illustrated through the following spiral-shaped cycle (Figure 2) given below:

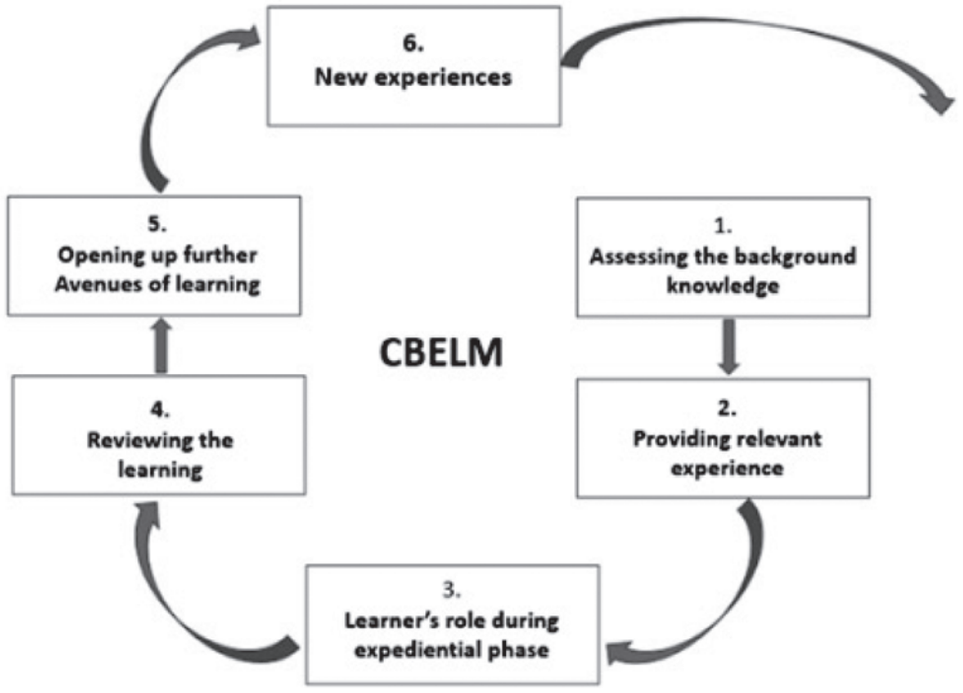


Figure 2

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Strengths of CBELM

i. **Content-based Experiences** – The nature of experiences followed in this model is content-based. Students may have hand on experience for projectable topics. For the non-projectable topics, illustrative experiences may be provided to them. They may go through different types of illustrative experiences, like suitable examples, real objects, models, role plays, story-telling, still and animated videos, etc.

ii. **Stages of the Learning Model** – This model is divided into five stages, viz.(i) assessing the learner's background knowledge, (ii) providing experience through a suitable source,(iii) gaining experiential learning, (iv)reviewing the content learnt and then(v) developing competence to apply knowledge in new situations.

iii. **Learning-Maturity Strengthened at each Subsequent Stage** – After getting experience from a suitable source, a learner is able to apply the learning in new situations at the completion of the learning cycle.

iv. **Wide Scope** – This model has a much wider scope than those of other models in covering the spectrum of different subjects. In fact, any subject can be taught by following this model. This is so because it includes a wide range of experience-providing sources.

v. **Scope of Developing Conceptual Skills** – After gaining the experience and after reviewing one's performance, one is able to develop the ability of describing the learnt matter theoretically.This strengthens one's conceptual ability.

What are the Principles of CBELM?

1. **Content-based Experience –** This model emphasizes on the principle that the experience to be provided to a learner, should be according to the nature of the content.

2. **Entry Level Knowledge –** This principle emphasizes the fact that best learning takes place when the learner has the required background knowledge which becomes the base of the desired learning.

3. **Experience Followed by Verifying Domains** – After having the hands-on experience or the illustrative experience, the learner is exposed to some domains, like reflection, analysis, and synthesis of learning. Finally, the learner is able to apply the learning in new situation/s.

4. **Learner's Active Involvement** – In order to make learning effective, it is necessary that the learner be actively involved in it. Teacher is there just as a facilitator.Students, after establishing their entry-level knowledge, engage themselves in gaining experiences, followed by reflection, analysis and synthesis of what has been learnt.

5. **Teacher as a Facilitator** – Teacher plays the role of a facilitator during the entire learning-process. His/her role is to ensure that the learner enters the experiential learning process with the requisite entry-level knowledge. Then he/she oversees the performance of the learner with the least intervention. He/she intervenes only when the learner deviates from the right path, otherwise the learner takes the responsibility of completing all the phases of this model.

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6. **Evaluative Questions Tagged with each Phase** – CBELM is characterized with five phases. At the completion of each phase, some questions are asked from the learner. This is a befitting response to overcome the examination phobia existing in the modern examination system and rote-learning.

7. **Principle of Cooperation** – It has been seen that an atmosphere of cooperation prevails when the experiential learning is taking place. Each learner contributes and supplements each other's contribution in completing each phase of experiential learning.

Topics of Concrete and Illustrative Experiences

Some Experiential-Learning topics/sub-topics of the subject Science of different classes are given in the ANNEXURE.

Conclusion

After going through different aspects of "Experiential Learning, it may be concluded that for getting rid of the vice of rote learning and fear of examination, experiential learning process should be adopted and the same belief has been presented by many educationists and pedagogues who were involved in framing the NPE-2020, as also by many supporters of Experiential Learning, some of them have been included in the references of this article. CBELM, as explained above may encourage the research scholars to carry on research in this area.

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ANNEXURE

As the author of this article is a Science teacher, she has given the examples of some topics/sub-topics of Science of different classes and how the same should be transacted through Illustrative experiences or through laying hands on experiences/

Experiential Learning

Subject – EVS/Science

S.No.	Class	Topic/Sub-topic	Mode	Modalities
1.	I	Types of Plants	Laying Hands on Experience	Students will be shown real plants /animated videos/ charts and will be asked to identify the types of plants i.e., whether herbs, shrubs or tree.
2.	II	Sense Organs	Illustrative Experience	Students will be able to identify 5 sense organs and their senses. They will be able to solve the worksheet related with sense organs.
3.	III	Our friends-Animals	Illustrative Experience	Students will have the prior knowledge of "who eats what". Videos will be shown of various animals and their eating habits. Charts showing various animals- students will identify the food they eat. Students will solve the puzzle relating to the feeding habits of animals.
4.	IV	Anita and Honeybees	Illustrative Experience	Pictorial depiction /chart/ Animated videos https://www.youtube.com/watch?v=3KQqSEXkTXY Students will be shown the animated videos and pictures showing the story of Anita who becomes Beekeeper. They will be given an activity of pictorial description in which they will be able to explain the process of Beekeeping and life cycle of a bee and the products obtained from Bee.
5.	V	Germination of Seeds	Laying Hands on Experience	Students will themselves sow some seeds in different pots and will observe the germination process. Through this they will get to know that all seeds do not grow into a new plant. Only seeds that get suitable conditions of air, water and warmth get germinated. Also they will observe stages of germination of a seed.

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6.	VI	Separation of mixture	Laying Hands on Experience	Class activities/ Animated videos 1.https://www.youtube.com/watch?v=f2lBicRjfss 2. https://www.youtube.com/watch?v=0DU0VP5lCPA 3. https://www.youtube.com/watch?v=nGC9v5z-CHc 4. https://www.youtube.com/watch?v=d_4BxqQgWvw Students will perform the activities like sedimentation and decantation, filtration and magnetic separation.
7.	VII	Male and Female reproductive parts of a flower	laying Hands on Experience	Activity/ Animated videos https://www.youtube.com/watch?v=d_4BxqQgWvw Students will dissect the hibiscus flower and separate the male and female reproductive parts of flowers- Carpel and stamen.
8.	VIII	Types of forces	Laying Hands on Experience	Class activity/ Animated video https://www.youtube.com/watch?v=0vhaoZ0Wj5g Students will perform activity and watch animated video to know the effects of forces like force can change the shape of the object, change the size of the object , direction of the moving object , change the speed of the object and to stop the moving
9.	IX	Types of Mixtures: a) true solution b) colloids c) suspension	Laying Hands on Experience	Class activities with the help of different substances. https://www.youtube.com/watch?v=UktHPe4oQLc Students will observe the types of mixtures and identify them and categorise them as true solution, suspension and colloids on the basis of appearance, stability and filtration.
10.	X	Thermal decomposition reaction	Laying Hands on Experience:	Lab activity https://www.youtube.com/watch?v=UndMvcd7ZqY Students will learn by watching lab activity of heating ferrous sulphate into ferric oxide, sulphur dioxide and sulphur trioxide and identify as thermal decomposition.

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