



# Impact of experiential learning as a pedagogy on learning outcomes

**Sanjay Bhardwaj**

Ph.D. research scholar Singhania University

Rajasthan, India

## Abstract

Experiential learning is widely discussed in education at different levels and in different disciplines. This article is an attempt to understand the concept of experiential as per the descriptions given in the book "Experience and Education" by Dewey (1938), the creator of experiential learning and the most popular model of experiential learning called Methods of Experiential Learning by David Kolb in 1984. Findings from related literature on experiential learning practices are then reviewed for optimal learning outcomes, specifically in K-12 education. Among other things, the influence of experiential learning on academic performance, learning motivation and self-efficacy was examined in detail. In addition, the implications of the peer-reviewed literature in terms of effectiveness, future scope and areas that need to be emphasised more are presented.

**Key words:** experiential learning, Kolb's learning cycle, concrete experience, reflective experience, active experimentation, abstract conceptualisation, activity based learning, PBL(project based learning), motivation, academic performance, self-efficacy, learning, behaviourists, cognitivists

## Introduction:

Since the conception of psychology as a science in its own right, learning has been one of the most studied topics, but there is no consensus on its definition. Behaviourists define it as a change in behaviour that results from experience. It has also been defined as ontogenetic adaptation, i.e. the adaptation of an individual organism to the environment during an individual's life (Skinner, 1938). Education is just a learning approach aimed at preparing children for life covering all dimensions of a child's personality: physical, socio-emotional, intellectual and spiritual. Philosophers, psychologists, and educators have made countless efforts to optimize learning outcomes.

The educational system has historically been somewhat rigid. The sole purpose of education was to pass on knowledge specifically found in textbooks, and skills developed in the past to a new generation that would use them in the future. There were laws and guidelines for moral development, and schools had the duty to impart moral instruction so that students would develop moral habits that complied with these guidelines. Numerous issues have been raised about this method. Transferring knowledge that was produced by a previous generation for their needs in order to help the current generation solve challenges for the future blatantly ignores dynamics. Additionally, students who are expected to be submissive, receptive, and docile instead obstruct their full potential. Actually, it is imposition from outside rather than growth from inside. Such a strategy will never aid in self-realization- the ultimate goal of any educational programme. This realisation by many societies led to a number of reforms in the global educational system. Progressive education is the name of this fresh and developing school of thought. This discusses learning through experience, developing abilities, skills and values that are useful and relevant in today's world, a programme that fosters students' individuality. However, this new method comes with its own set of issues.

Despite the distinctions, there is one thing that unites all of them: the conviction that a learner-centric approach and teachers who draw on their students' expertise and experience improve learning outcomes. It allows the students to interact and think critically about the subject. Experiential learning theories are the foundation of learning-by-doing.

One of the most widely used educational theories is Kolb's notion of experiential learning. Kolb asserts that learning is a process in which knowledge is developed by transforming experience. This learning process, which comprises four steps, is described as a cycle.

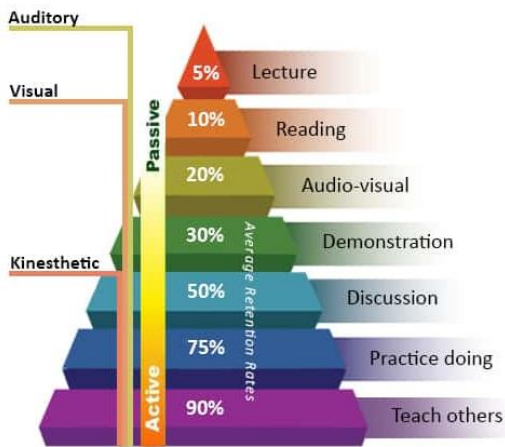
Concrete Experience (CE), Reflective Observation (RE) Abstract conceptualisation (AC) and Active Experimentation (AE). The cycle can be entered at any point but phases must be followed in sequence with correct tempo.

Kolb himself has referred the task of Lewin, Dewey and Piaget to identify the common characteristics that serve to define the nature of experiential learning. These models contend that learning happens when competing viewpoints on how to approach the world are resolved. The Lewinian model highlights two such dialectics: one is between concrete experience and abstract notions, and the other is between observation and action. For

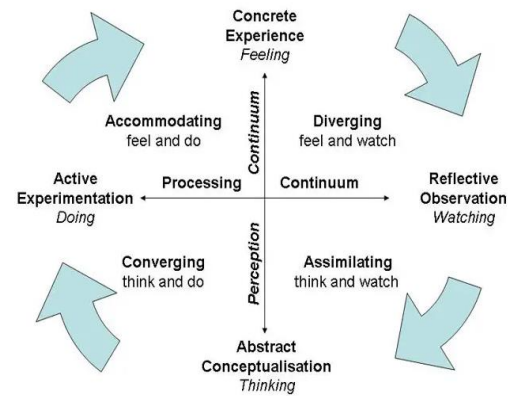
Dewey, dialectic refers to the relationship between the impulse, which gives ideas their movable energy, and reason, which provides its direction. In Piaget's framework the twin processes of accommodation of ideas to the external world and assimilation of experience into existing conceptual structures are the moving force of cognitive development. ( Kolb,D.A. 1984).

Boud and Walker (1992) incorporates experience and reflection form Kolb's model and add a third -preparation for the event. Dean (1993), while presenting a model for adult education sees experiential learning as a series of stages –planning, involvement, internalisation, reflection, generalisation, application and follow-up.

A learning pyramid created by the National Training Laboratory aids teachers in creating relevant and successful learning experiences.



Adapted from the NTL Institute of Applied Behavioral Science Learning Pyramid



### Objective of the Study:

1. To review the findings of the related literature concerning experiential learning and its effect on students' learning outcomes
2. To give implications based on the review of the concerned literature

### Methodology:

This is a qualitative review study of already available literature. The findings as well as the implications are based on the reviewed literature only.

### Criteria for inclusion:

1. Only those papers, which are directly related to experiential learning methods, were included.
2. We reviewed papers from among the various Indian and international journals.

### Data collection:

Many research articles cited in the experiential learning theory Bibliographies volumes 1, 2, and 3 by Alice and David Kolb were referenced. Also included were books on experiential learning by Dewey and Kolb. Furthermore, some of the other studies included in the references were chosen. The most pertinent literature, as deemed by the review's objectives, was chosen from this database.

### Study review on effects of experiential learning:

Experiential learning is best characterised by action and reflection. For its efficacy for improving learning outcomes—and that too in all domains, including affective and physical, not just cognitive—this is the most widely discussed pedagogy in the world.

Children pick up knowledge in a variety of methods, including through personal experience, making and doing things, experimentation, reading, discussions, asking, listening, thinking and reflecting, and expressing oneself verbally, physically, or in writing. In the course of their development, they need access to all of these chances. (NCF, page 34, 2005)

The academic achievement of primary class students was found to increase in a study by Raj Laxmi in Noida, India, if the lecture style is replaced by meaningful experiences such as engaging materials, experiments, hands-on activities, deep questioning, forming hypotheses and testing, collaboration and comparison. (Raj Laxmi Raina 2019' JETIR). It not only improved performance but also promoted the growth of critical thinking, intrinsic motivation, creativity, originality, and a drive to learn.

Children who are taught via action, learning through doing, learning through experience, learning through discovery, and learning through exploration are also more likely to be intrinsically motivated. They engage in an enjoyable activity and use it as a chance to discover, grow, and realise their potential. A study conducted at Kinave National High School in 2016–2017 found that participation in activities and creative learning experiences enhances interest and conceptual knowledge, which also helps individuals to choose career goals and strive for better grades. (Monaliza S. Aagsalog, IJSRP.2019) Students also scored highly in self-determination and self-efficacy in addition to high means in intrinsic motivation, career motivation, and grade motivation. Comparatively to kids who are educated using a traditional classroom setting, experiential learning students score better academically.

Informal learning experiences are optional, loosely structured, intended to go beyond the assigned literature, and they connect academic concepts to the outside world. When compared to students from impoverished informal learning environments, those with enriched informal learning environments had much greater scientific reasoning ability. The scientific reasoning skills of students in inquiry-based science courses were also superior to those of students in non-inquiry-based science classrooms ( Brian L. Gerber, Anne M.L. and Cavallo 2001). A high degree of motivation for mathematics and science is produced by including such experiences. It boosts interest and raises understanding of the value of mathematics and science and their applications, the breadth of the two disciplines, the connections between science and mathematics, and the complexity of careers in science and mathematics (Andrea E. Weinberg, Carole G. Leonard Albright 2011). The research also proved the gains equally in both the genders

The concept of science self-efficacy refers to students' confidence in their ability to complete challenging science tasks, projects, assignments, activities, solve any scientific difficulties, go on field trips, and manage science projects (Bandura, 1997; Britner and Pajares, 2006). Research have shown that students' preference for a strategy or method can influence their level of science self-efficacy (Taasobshirazi and Glynn 2009),

To increase students' self-efficacy, Margolis and McCabe (2006) suggested a variety of experiential or concrete events. These exercises involve assigning demanding assignments to the students so they can work diligently to identify the best solution to the issue. Instructors must impart knowledge in a clear and practical manner, which may entail giving students complex tasks to do, breaking them down into manageable parts, and describing how to monitor their progress on each activity. The usage of educational resources or teaching aids during the teaching and learning process also helps to focus the learner's attention and to encourage teachers, both of which serve to increase self-efficacy. Several instructional strategies, including question-and-answer sessions, the use of technology, group projects, and conceptual problem-solving tasks, were undoubtedly connected to students' perceptions of their self-efficacy in the subject of physics (Fencl and Scheel, 2005). Another study demonstrates the value of science experiential learning exercises for raising student self-efficacy. 2020 (Shivani, 2020 JIE)

One of the goals of education is the development of critical thinking, which is the investigation of facts, evidence, observations, and arguments in order to make a judgement that is self-directed, self-disciplined, self-monitored, and self-corrective. The use of experiential learning methods in accordance with the Kolb's cycle improves critical thinking in both male and female pupils. (Remya,Chetan U. Chavan2022)

The use of technology and a blend of hands-on, virtual, and remote laboratory sessions in accordance with Kolb's cycle can also improve learning results in laboratory education. (ZK Nagy and M Abdulwahed, 2009, Journal of Engineering Education, Wiley Online Library)

Children's knowledge, attitudes, and actions around healthy eating can be improved through experiential learning activities. For kids in elementary school, methods like food preparation and cooking, taste testing, playing games, acting out scenarios, and gardening have been demonstrated to improve nutrition results. The use of techniques including sensory evaluation, taste testing, interactive games, creative arts activities, and storybooks with pre-schoolers shows potential. Combining several tactics, involving parents, and being based on a theoretical model were all essential components of effective interventions. Future interventions that aim to employ experiential learning to promote healthy eating in children can benefit from the findings of this analysis. (International Journal of Environmental Research and Public Health, review 2021)

The way students are taught in schools has an impact on their understanding of entrepreneurship, which is essential for fostering economic prosperity for nations and ensuring fair competition in competitive markets. According to a study measuring the impact of experiential learning on entrepreneurial intention at higher education, self-efficacy, cognitive load, and empirical learning all significantly predict entrepreneurial intention. (Nabaz Nawzad Abdullah, Govand Anwar, 2021.)

In addition to examining how preceptors use their expert knowledge to improve students' experiential learning during clinical placements, studies have been done to analyse the reflective dialogues and processes that take place between preceptors and nursing students. The development of nursing students into reflective practitioners has benefited greatly from experiential learning. (Jose Luis Medina-Moya, Juan Luis Gonzalez, Cesar Cardente-Reyes, Marta Rodriguez-Garcia)

Numerous hospitality curricula that include industry-based experiential learning to supplement the classroom setting have discovered increased understanding of how organisations function, increased ability to view career expectations realistically, an increased network of professional contacts, increased ability to take initiative, increased ability to adapt to change, increased leadership skills, and increased financial management skills. Journal of Education in Travel & Tourism, SA Lee, 2008)

Students who interact in real-world circumstances through an experiential pedagogical approach to learning are better able to relate to what they are learning, which supports their growth as people who uphold the shared values that result in good character and the welfare of society (Glennon, 2004).

### **Implications:**

This review concentrated on the value of experiential learning and how it affects academic results. The view is important for the students since it gives them a chance to demonstrate good behaviour and procedures in practical settings. In order to develop all facets of their personalities, learners engage in mental, social, and emotional exchanges during experiences. The children's participation in the classroom, motivation, sense of self-efficacy, awareness, and general cognitive and affective development are all aided by this. Research on the use of experiential learning as a pedagogical in higher education and training programmes, including those in management, medical science, virtual computer laboratories, hospitality, etc., is extensive. Yet, the work is low and primarily limited to science and mathematics at the school level. Given the advantages of experiential learning, this area of K–12 education needs additional investigation.

In this method, the teachers' job shifts from knowledge provider to experience mediator. All programmes for preparing teachers should highlight this. It is necessary to address the issue of developing meaningful learning experiences and their integration with curricula.

The Indian National Education Policy 2020 advocates for a change to a competency-based and experiential learning method to guarantee that students are proficient in their learning for coping with real-life circumstances. Any modification in pedagogy that promises to improve outcomes needs to be explored further and utilised if deemed beneficial in order to support the success of government of India projects like "Make in India" and "Khelo India."

Nowadays, entrepreneurship is more necessary than ever. The government of India's "Made in India" and "voice for local" programmes, as well as the Prime Minister's own initiative, have greatly increased interest in entrepreneurship. The New National Education Policy of 2020 (NEP) of India sought to promote an inclusive, participatory education system with a focus on fostering national development. The National Education Policy promises to give students and young people in India new job prospects in entrepreneurship, which complements the Start-Up ecosystem. The stepping-stone is pedagogical research and the necessary adjustments. The education system must be overhauled urgently for the success of these programmes in particular and national development in general.

### **Conclusions:**

Almost all studies demonstrate how the use of various experiential and active teaching methods can improve learning at all levels, from pre-primary through college and professional. It has been applied successfully in a variety of settings, including schools, universities, agriculture, administration, industries, and even medical and nursing. Experiential learning involves participation and is interactive. All of the learner's personality's cognitive, emotive, and behavioural facets develop through participation in meaningful experiences.

Students' overall growth in educational institutions depends not only on their academic and intellectual interests but also on their involvement in the community and in social activities. It is advised that students, especially young people, live in close proximity to the neighbourhood where their institution is situated. Philosophers, teachers, and authorities all share this belief. It involves students in community-building, social rebuilding, and nation-building activities with a purpose.

Experience alone, however, does not ensure learning; it must be significant and relevant. The experience must be carefully planned with the learning objectives in mind, and it must be backed up by conceptualization and reflection. Unless reflection and conceptualization are taken care of and the learner is prepared to apply the knowledge in novel, uncharted situations, doing on its own, does not result in learning.

**References:**

1. Dewey, J. (1938). *Experience and Education*. New York: Macmillan Company.
2. Kolb, D.A (1984). *Experiential learning: experience as the source of learning and development* Englewood Cliffs, NJ: prentice hall
3. BP Beaudin, D Quick (1995) *Experiential Learning: Theoretical Underpinnings* - Fort Collins, CO: Colorado State University
4. Monaliza (2019). *Experiential Learning Approach: Its effects on the academic performance and motivation to learn Physics of grade 10 students*. *International Journal of Scientific and Research Publications*
5. Y Kong –(2021) *The role of experiential learning on students' motivation and classroom engagement*. *Frontiers in Psychology*.
6. Andreaa E. Weignberg, Carole G. Basile, Leonard Albright (2011). *The Effects of an Experiential Learning Programme on Middle School students' Motivation Towards mathematics and Science*. *Research in Middle Level Education*
7. Raj Lakshmi Raina. (2019) *Improving Science learning Through experiential hands on Activities*. *Journal of Emerging Technologies and Innovative Research*
8. E.U.C. Nwaeze, R.C. Onuoha, Ifeoma Ukogo. (2016). *Innovative Teaching Methods in Science education for Junior Secondary School Basic Science Students*. *Journal Of Teacher Prespective*
9. Remya V R, Chetan U Chavan.(2022). *A study on the effect of gender in developing critical thinking skills of secondary school students through Kolb's experiential learning technique*. *International Journal of Creative Research Thoughts*
10. Nguyen Ngoc Nguyen.(2022) *Research on the effect and effectiveness of experiential learning for university students*. *Journal of Positive School psychology*
11. G Anwar, NN Abdullah. (2021). *Inspiring future entrepreneurs: The effect of experiential learning on the entrepreneurial intention at higher education*. *Journal of English Literature and Social Sciences*.
12. Michael P. Marlow, Brad Mclain.(2011). *Assessing the Impacts of Experiential Learning on Teacher Classroom Practice*. *Research in Higher Education Journal*.
13. GF Burch, R Giambatista, JH Batchelor, Jana Burch.(2019). *A meta-analysis of the relationship between experiential learning and learning outcomes*. *Journal of Innovative Education*.
14. Bandura, A (1994) *Self Efficacy Encyclopedia of Human behaviour*
15. SL Britner, F Pajares. (2006) - *Sources of science self-efficacy beliefs of middle school students* *Journal of Research in Science Teaching*.
16. Allen, J.W. (1992). *To feasts of Life: a phenomenological and heuristic study of experiential education in the classroom*. *Unpublished doctoral dissertation, Towson state University, Towson, MD*
17. D Boud, R. Keogh, D Walker - 2013 *Reflection: Turning experience into learning* - [api.taylorfrancis.com](http://api.taylorfrancis.com)
18. SM Glynn, G Taasoobshirazi.(2009) *Science motivation questionnaire: Construct validation with nonscience majors*.- *Journal of Research in Science*. *Wiley Online Library*
19. Margolis and McCabe (2006). *Improving Self-Efficacy and Motivation: What to Do, What to Say*. [journals.sagepub.com](http://journals.sagepub.com)
20. H Fencl, K Scheel.(2005). *Engaging Students*. *Journal of College Science Teaching*
21. Shivani.(2020). *Impact of experiential learning programme on Students' Science Self Efficacy*. *Journal On Indian Education*. NCERT.
22. M. Abdulwahed, Z.K. Nagy.(2009) *'Applying Kolb's experiential learning cycle for laboratory education'* *Journal of Engineering Education* [Google Scholar](https://scholar.google.com/)
23. Sumantla D. Varman, Dylan .p Cliff, Rachel .a. Jones, Zhiguang Zhang, Karen, Bridget (2021) *Experiential Learning Interventions and Healthy Eating Outcomes in Children: A Systematic Literature Review*. *International Journal of Environmental Research and Public Health*
24. Marta Rodriguez-garcia, Jose Luis medina-Moya, Juan Luis Gonzalez, Cesar Cardente-Reyes .(2011). *Experiential learning in practice: An ethnographic study among nursing students and preceptors*.
25. Scott A. Lee.(2007). *Increasing Student Learning: A Comparison of Students' Perceptions of Learning in the Classroom Environment and their Industry-Based Experiential Learning Assignments*.
26. Rose, Norman S.(1992). *Moral Development: The Experiential Perspective* .*Journal of Moral Education*,
27. Kelli J. Schutte, Lori Wetmore. (2012). *Experiential Learning as a Catalyst for Moral Development in Cognitive Growth*. *International Journal of Business and Social Science*
28. *Diagram learning pyramid*. National Training laboratory.