

Experiential Learning: An Emerging Pedagogical Practice Across School Stages in Light of NEP 2020

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Abstract

Learning is essentially modifying behavior. In schools, different methods derived from various learning theories are employed, each proposing its own pedagogical strategies to improve students' learning. Most agree that learning happens when there is an interactional interplay between the person (intrinsic) with the environment (extrinsic) through purposeful activity. Experiential learning (EL) is one of the most sought-after innovative classroom pedagogies where students develop deeper understandings through activities, experiences and reflection on the concepts. Experiential learning naturally begins at infancy. It allows the learners to retain and apply what they learn at different school levels and even beyond. It is also an important tool for adults to learn. This article emphasizes the recommendation of the National Education Policy 2020 on EL as a teaching-learning practice across the four school stages. It suggests harnessing EL to achieve the goals of NEP 2020, such as fostering critical thinking and problem-solving abilities, engaging through a multidisciplinary approach for holistic development, effective teacher training, blended education, while also incorporating India's rich cultural heritage and multilingualism for a well-rounded and child-centric education system. This article explores EL using Kolb's Learning Cycle as a pedagogical approach and proposes strategies and approaches that teachers must use to tailor instruction for an inclusive and engaging learning environment. Therefore, this article will be insightful for all the stakeholders such as teachers, teacher educators, researchers and policy makers working on increasing overall students' learning outcomes within the context of the Indian school system.

Keywords: Experiential Learning, National Education Policy, Emerging Pedagogy, 21st Century Classroom, Child-Centered Education.

Introduction

'Experiential learning within each subject, and explorations of relations among different subjects, will be encouraged and emphasized despite the introduction of more specialized subjects and subject teachers (NEP, 2020, para 4.5).'

Learning is an ongoing and lifelong process internalized by all individuals. Psychologically, learning is defined as a relatively permanent change in behavior (Kimble, 1961). It involves observing, enquiring, interacting with others, insight, practice, exploring and experimenting things to construct a sense of understanding of our surroundings.

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Our life experiences are an important source for our learning. Children acquire a vast amount of knowledge from everyday life experiences. They observe, listen, play, and actively participate in their environmental settings. Their early experiences, though less complex, significantly contribute to their learning. Experience plays a dominant role in shaping and molding a learner's behavior from birth onwards.

Experience is an interaction of the organism and the environment. Meaningful interaction leaves an impression on the mind (Dewey, 1925). Hence, experiences are “mental and corporeal phenomena” that can be directly or vicariously felt, recounted, reproduced, and transferred to new situations, thereby generating new learning (Janzten, 2013).

A child strikes a matchstick on the side of a matchbox and gets their fingers burned. Such an experience makes the child permanently learn to be careful when handling the matchbox in the future. Similarly, at a young age child understands by observation that if they throw a ball towards the sky, it does fall back to the ground. Here, the child might not have conceptualized the nitty-gritties of ‘gravity,’ yet understands. Hence, through experience, observation and reflection, the information is received by the child.

National Education Policy 2020 gives a central role to experiential learning (EL) as a pedagogical approach across the school stages. It states,

“In all stages, experiential learning will be adopted, including hands-on learning, arts-integrated and sports-integrated education, story-telling-based pedagogy, among others, as standard pedagogy within each subject, and with explorations of relations among different subjects (NEP, 2020, para 4.5).”

Learning precedes all changes in behaviour. New experiences are constructed through the interaction of prior knowledge and experiences, which makes it an ongoing process, thus maintaining the “experiential continuum” (Dewey, 1938). Therefore, experiences and learning are complementary and shape the behaviour of learners. The two-way exchange of experience and learning between the learner and learning tasks forms the basis of EL.

Perspectives of Experiential Learning

EL has found its theoretical and pedagogical stronghold through the works of Kurt Lewin, John Dewey, David Kolb, Jean Piaget and Jean Vygotsky among others. Lewin's Field Theory (1940) emphasizes that behavior formation and goal-directed learning occur when an individual participates in a series of life spaces (work, family, society, etc.). Dewey's Model of Experiential Learning asserts that learners “learn by doing” and “concrete experiences lead to higher-order purposeful action” (Dewey, 1938). Through his Laboratory Schools, he ascertained that life is a laboratory where learners collaborate, work on materials with hands-on activities to gain experience, inquire and test hypotheses. Like Lewin, Dewey also describes, “Learning is a dialectical process that combines experience and concepts, observations, and action.” (Dewey, 1938). Piaget's philosophy of cognitive development supports EL as a pedagogy. Piaget claims that cognitive structures (schemas) are a result of interaction with the environment. Learning takes place through assimilation of experiences into existing schemas/concepts, accommodation of concepts to fit new schemas, and striking a balance (equilibrium) between existing and new information (Piaget, 1936). Therefore, experiences and previous learning constructs new learning. The constructivist philosophy is consolidated by Vygotsky, who

believed learners construct knowledge through close interactions with their socio-cultural environment. This implies the importance of individual and collaborative experiences in the learning process (Vygotsky, 1978).

Experiential Learning Theory (Kolb, 1984)

Kolb pioneered Experiential Learning Theory (ELT). He advocated that learning is creation of knowledge through the transformation of experience (Kolb, 1984). Kolb's theory suggests learners must engage with learning experiences that foster active participation and sensory interactions along with the learning experiences (Akella, 2010).

ELT is based on Kolb's belief that that "ideas are not fixed and immutable elements of thought but are formed and reformed through experience" (Kolb, 2014, p. 36). They are formed and reformed through learners' preferred learning styles, which are influenced by multiple factors such as social environment, educational experiences, and a wide spectrum of learners' cognitive processes (Kolb, 1984). Identifying one's learning styles helps set learning goals, implement learning strategies, reflect on experiences, and take responsibility for one's learning. Kolb's learning cycle provides a structure for identifying learning styles and establishing learning stages. The learning cycle model is a recurring four stages/modes cycle. Through the model, learners engage in a cyclic manner between 4 stages: concrete experience (CE), reflective observation (RO), abstract conceptualization (AC), and active experimentation (AE) as shown in Table 1 (Kolb, 1984).

Table 1 Kolb's Stages of Experiential Learning

Concrete Experience (CE)	Learners learn from their surroundings, personal interactions and real-life experiences. They actively participate in the experience through the five senses.
Reflective Observation (RO)	Learners employ cognition to reflect on the experience or situation to form an opinion. They engage in the process through observing and perceiving. They evaluate with objectivity and patience.
Abstract Conceptualization (AC)	Learners create theories and principles based on concrete information and logical reasoning. They use inductive-deductive reasoning to draw conclusions and generalize theories and principles.
Active Experimentation (AE)	Learners use the conclusions drawn in the AC stage as hypotheses to test validity. Learners constantly renew their thinking and methods to conceptualize new experiences and integrate them with past experiences.

Source: Adapted from Kolb (1984), Kolb and Kolb (2013).

Kolb considers any one learning mode to be insufficient in processing information. All four stages/modes of the cycle must be negotiated by the learner for effective learning. However, a learner could enter at any point of the cycle and may learn most effectively through one of the four learning styles based on his/her preferred stage/mode.

Kolb (1984) developed four learning styles based on two continuums, the Processing Continuum and the Perception Continuum (Kolb, 1984).

1. Diverging (CE/RO - Feeling and Observing): Divergers are imaginative and excel at looking at situations from multiple perspectives. They prefer to watch and gather information before acting. They are good at generating ideas and brainstorming about culture and people, and tend to be emotional and open to feedback.
2. Assimilating (AC/RO - Thinking and Watching): Assimilators prefer a logical approach. They are strong at understanding and organizing large amounts of information into clear, logical formats. They are more interested in abstract concepts and theories than in people, and they prefer readings, lectures, and analytical models.
3. Converging (AC/AE - Thinking and Doing): Convergers are practical problem-solvers who can find practical uses for ideas and theories. They are skilled at experimenting with ideas, decision-making and performing technical tasks. They tend to be unemotional and focused on finding a single best solution.
4. Accommodating (CE/AE - Feeling and Doing): Accommodators rely on intuition and prefer a practical and planned experiential hands-on activities. They are adaptable to change, attracted to new challenges. They learn best by doing and actively experimenting with new ideas, often relying on intuition to solve problems.

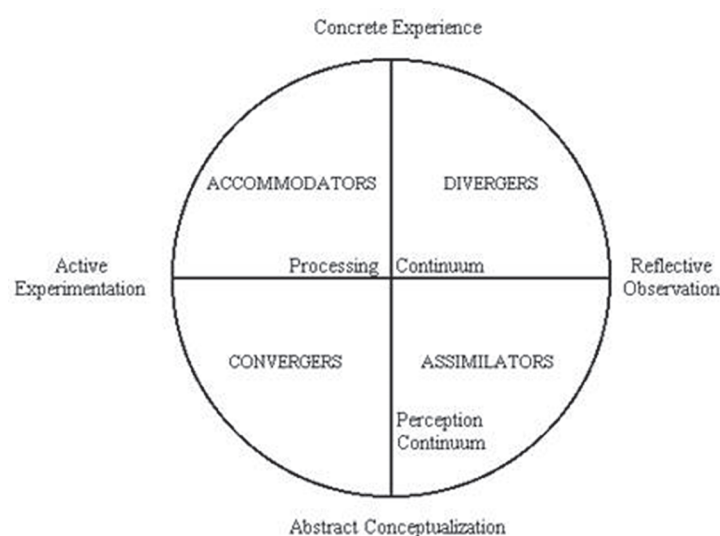


Figure 1. Kolb's Learning Cycle and Learning Styles. *Source:* Olivos et al. (2016)

As children go through stages of development, it would seem that they must fit only one learning stage and slowly progress through the cycle as they grow. However, Kolb refutes this and permits learners at any development stage to enter either of the stages of the cycle and then proceed through other stages of the cycle at their own pace, depending on opportunities presented to them. This continues cyclically.

Literature Review

Multiple pedagogical philosophies have been established and implemented to achieve learning outcomes, focusing on the holistic development of learners through experiential learning. Recent empirical research suggested that EL may be a valuable pedagogical approach to support the acquisition of knowledge and children's academic achievement. EL can bridge the gap between concepts and skills using relevant real-life-based situations. In addition, EL can boost motivation, creativity, and self-confidence while developing metacognitive and practical skills (Gorghiu & Santi, 2016).

EL has been associated with increased engagement, and attendance (Ranken et al., 2024). Furthermore, it is found that EL methodologies positively influence students' employability skills and attributes (Giridharan & Raju, 2016). EL has emerged as a powerful approach for developing 21st-century skills and enhancing critical thinking in education (Pamungkas et al., 2019).

Research indicates that integrating non-cognitive skills into academic curricula and student life can enhance their acquisition (Ahuja et al., 2022). Studies have found that EL programs can make school more enjoyable for students, improve collaboration skills, and foster non-cognitive skills without compromising standardized test performance (Scogin et al., 2017). It can be effectively integrated into various educational contexts, including vocational training and independent learning programs, to foster skills like empathy, collaboration, and real-world problem-solving.

EL has been shown to have a positive impact on academic achievement and promote holistic student development, balancing academic achievement with essential non-cognitive skills across various subjects and age groups. The implementation of experiential learning aligns with NEP 2020's vision of preparing students for the complexities of the 21st-century world.

Experiential Learning Across School Stages

'Pedagogy must evolve to make education more experiential, holistic, integrated, inquiry-driven, discovery-oriented, learner-centred, discussion-based, flexible, and, of course, enjoyable (NEP, 2020, p. 3).'

EL is fundamental, especially for young children who are in their early stages of schooling. They enthusiastically engage through their senses to connect with their environment and activities. As they grow, the use of EL allows them to delve deeper into the dynamics and underlying causes of complicated situations and problems while building critical thinking abilities (Lone & Kaur, 2024).

As per NEP 202's recommendation, a National Curricular and Pedagogical Framework for Early Childhood Care and Education (NCPFECCE) is to be developed by NCERT for children ages 3 to 8 (foundational and primary stages). It recommends research-based international best practices and rich local traditions of India involving art, stories, poetry, games, songs, and more. EL as a teaching approach for holistic development is the sole focus at these stages with the aim of universal foundational literacy and numeracy attainment by 2025 (NEP, 2020, para. 1.3).

A 3-month play-based ‘school preparation module’ for all Grade 1 students as directed by NEP 2020 has been developed by NCERT. It constitutes EL activities and workbooks for the learning of alphabets, sounds, words, colours, shapes, and numbers (NEP, 2020, para. 1.3).”

Moreover, the National Curriculum Framework for School Education (NCF SE) 2023 states that by middle school, learners gradually gain logical thinking, experience complex emotions and display objective expression to make fair moral judgements. Here too, EL paired with relevant academic activities improves learners’ motivation and sense of autonomy equips learners to be problem solvers (Kolb & Kolb, 2011).

For grades 6 to 8, the NEP 2020 mentions that students must acquire mathematical and computational skills through a variety of innovative and experiential methods, including coding, puzzles and games that make mathematical thinking more enjoyable and engaging. (NEP, 2020, para. 4.25).

Four years of secondary education have been laid out for multidisciplinary study with a greater focus on critical thinking and aspirations for life, offering greater flexibility in subject and discipline choices for the students. The curriculum style at this stage must extend from the middle stage and hence, must also be experiential. Students also have an option to drop out after 10th class and re-enter in the next phase for specialized vocational or similar experiential courses in classes 11th and 12th (NEP, 2020, para. 4.2).

Throughout the schooling years, EL practices such as activity-based learning, integration of sports, vocations and arts must be incorporated (NEP, 2020, para. 4.6). For gifted and talented students, the NEP 2020 highlights the need for EL-based pedagogy by giving them supplementary enrichment materials and guidance. Project-based clubs and circles such as science circles, math circles, music & dance circles, health & well-being clubs must integrate schools, school complexes, districts, and beyond (NEP, 2020, para. 4.44).”

Piaget explains that children, as they transition through school, enter into the formal operational stage. They begin to develop logical thinking with increased interest in abstract concepts such as freedom, love and justice (Piaget, 1936). Adolescents begin to construct relationships between concrete operations and abstract forms. Children at this stage of abstract conceptualization can perform hypothetical-deductive reasoning, which involves developing hypotheses based on what might logically occur (Kolb, 1984, p.36). They begin to apply cognitive, communicative and creative problem-solving skills through socio-emotional interactions. Thus, it is important of teachers to know, identify and cater to all learners as per Kolb’s learning stages and learning styles, for developing critical thought, creativity and relevant skills must be acknowledged.

NEP 2020 reconciles Piaget’s stages of development (sensorimotor, preoperational, concrete operational, and formal operational (Piaget, 1936)) and Kolb’s learning cycle with classroom pedagogical approaches. In accordance, teachers must use multiple methods from different EL stages, allowing maximum engagement from learners of varied learning styles to cater to a diverse classroom. Based on the learning content, a teacher may demonstrate a concrete model for learners’ active hands-on engagement. The teacher may also ask questions and discuss topics to encourage learners to reflect on concepts, provide reading materials for abstract conceptualisation, and give models/projects for learners to design to apply the knowledge learnt. In this way, a teacher may allow students to holistically progress through all 4 stages of the learning model.

It may also come across that NEP 2020 endorses Piaget’s theory, outlining a sequential progression of cognitive development in children as they progress through the 4 school stages. Kolb’s model, on the other hand, seems more applicable to adult learning as it emphasizes a nonlinear, continuous cycle of experience

and reflection, allowing learners to enter at any stage and revisit stages as needed (Kolb, 1984). Both Piaget and Kolb are in agreement that varied modes of experiences must be presented to the learner to catalyse learning, along with active engagement with content and reflection.

In conclusion, throughout school, learning should rely more on EL with hands-on exploration as the main source of learning and discovery. It helps students engage in authentic, real-world experiences that cultivate their knowledge, skills, and character. It promotes a deeper understanding of the subject matter and encourages the development of well-rounded individuals (Lone & Kaur, 2024).

Significance of Experiential Learning in Achieving the Goals of NEP 2020

The NEP 2020 policy reflects on the significance of EL and aligns it with its goals:

- Focused on critical thinking and problem-solving: NEP 2020 has made it clear that the syllabus content will be reduced, centered around critical thinking. EL is designed to promote the necessary skills by presenting students with real challenges, encouraging them to analyze situations, and developing innovative solutions (Lone & Kaur, 2024).
- Multidisciplinary approach: NEP 2020 allows children to explore diverse subjects and areas of interest. EL naturally supports this approach by providing opportunities for students to integrate knowledge from various disciplines in real-world contexts (NEP, 2020, para. 11.2). Teachers trained in carrying out teaching through a multidisciplinary perspective using EL and similar child-centric approaches must be hired.
- Vocational training: EL can be effectively integrated into various educational contexts, including vocational training and campus learning programs, to foster skills like empathy, collaboration, and real-world problem-solving (Dona et al., 2024).
- Development of non-cognitive skills: Findings from studies suggest EL can be effectively implemented across various educational settings to promote holistic student development, balancing academic achievement with essential non-cognitive skills. A case study at the secondary level has demonstrated a significant positive impact of EL on knowledge acquisition, social skill development, and cultural awareness (Voukelatou, 2019).
- Teacher training and professional development: NEP 2020 highlights the importance of teachers' professional development and especially EL so that teaching becomes effective (NEP, 2020, para. 15.4).
- Blended education: The NEP 2020 encourages blending EL with online/digital education to make it efficient and effective. It believes that digital education at the school level has limited scope, especially in subjects with practical applicability (NEP, 2020, para. 24.3).
- Holistic assessment: For reporting student performance, holistic progress cards must be used designed as per the guidance of NCERT and SCERTs. It must be able to convey the performance of a child on all 3 domains through project-based and inquiry-based learning, quizzes, role play, portfolios and other EL learning approaches. It should also have scope to record feedback based on the child's self-assessment, with peer assessment and teacher assessment (NEP, 2020, para. 4.35).

- Building upon India's rich culture: NEP 2020 focuses on India's traditional, cultural and ethical values. EL helps students think and learn using art forms, festivities and folk tales, and adopt traditional knowledge of astronomy, astrology, administration and planning, architecture, craft and medicine with modern science, thereby making learning wholesome.
- Multilingual education: Multilingualism and especially the learning of Sanskrit must be offered at school and higher levels as well. India's rich literature in classical languages is a treasure trove of knowledge. Tamil, Telugu, Kannada, Malayalam, etc. may also be opted by learners even through digital/online modules, through experiential and innovative approaches. (NEP, 2020, p. 4).

Holistic development includes the cognitive, affective and psychomotor development of the child. Holistic development of students, going beyond academic achievements to include life skills to prepare learners for the challenges of life (Lone & Kaur, 2024). NEP 2020 emphasizes EL to foster holistic, multidisciplinary and child-centered education by applying theoretical knowledge in real-world scenarios, thereby developing well-rounded individuals (NEP, 2020, para. 11.3).

Role of Teachers in Inculcating Experiential Learning

The following nine points should be acknowledged by a researcher when planning and executing the EL process (Chapman, McPhee, & Proudman, 1992, p. 243)

- Content and process: Teaching and learning should be in harmony between the experiential activities, the relevant content and the conceptual knowledge. Knowing Kolb's learning style helps teachers to understand the importance of questioning strategies, explicit instruction and lecture methods in the EL process.
- Monitoring and encouragement: The primary task of the teacher in EL classroom is to create a safe space for students and allow room for self-discovery. They shouldn't judge learners on their thinking, effort, pace, success and failure.
- Purposeful learning: In the EL process, learners choose their learning and self-teach themselves. Therefore, learning must be meaningful for the learner. Teachers should be aware of learning modes and styles to plan learning activities that are personally relevant to the learner.
- Encouraging to think beyond: Experiential activities should draw connections between the learning that learners are doing within the class and the world outside. Teachers should design activities that build learners' ability to see relationships in complex systems and find a way to work within them.
- Building emotional resilience: Students must be fully immersed in the experiential learning experience. However, this should not make them feel limited in what they are expected to achieve from the learning objectives. Teachers should be able to engage the learners in the experiential process to an extent that encourages them, builds their confidence and resilience to set their own goals and pursue them.
- Reflection and self-discovery: Learners should be able to realize the opportunities that open from their learning, which happens through experiences and interactions with the world. Teachers should therefore provide space that is safe for self-exploration, where learners analyze themselves by being resilient and introspecting their own value system.

- **Meaningful relationships:** Teachers must encourage the learners to navigate the real world through what they are learning. For this, instructional strategies should help learners to analyze themselves, their strengths, and connect with the teacher, peers, as well as the learning environment resulting in enhanced learning outcomes.
- **Collaboration and communication:** Teachers should foster collaborative and team spirit through EL opportunities such as hands-on activities, role-plays and simulations, flip classroom, field trips, excursions, projects, etc. Shared experiences from a variety of resources, environment and society develop lifelong skills.
- **Stepping out of comfort zones:** Learners are motivated to challenge beyond their comfort zones. Learners should be allowed to explore beyond their immediate environment, but also in their perceived societal settings such as being accountable for their actions and taking responsibility for the consequences.

A teacher must also incorporate assessment and feedback that align with EL. Learning needs to be observable, measured, quantified, and defined in terms of the learning outcomes. Teachers should provide timely feedback by integrating all components of instructional practices, on which learners reassess their attempts and modify their behaviour for new experiences. The role of experiential learning is where dialogue, students' active involvement and action are encouraged (Sachdeva, 2017).

Conclusion

NEP 2020 emphasizes that the focus of school must shift completely towards experiential learning through hands-on activities, integration of arts, sports, storytelling and other pedagogies in each subject discipline. The classroom teaching and learning should be re-designed, bottom-up, so that they focus more on competency-based education (NEP, 2020, para 4.6).

The ancient Indian knowledge system gave importance on the holistic development of the learners. Unfortunately, this intent had not translated over time in the Indian school system, which got reduced to rote memorization and bare reproduction of facts. However, at present, the learners' educational needs are shifting towards more purposeful learning, where they can actively participate and develop skills that can be applied in real-world situations.

NEP 2020 aims to cultivate well-rounded individuals capable of rational thought, empathy, and creative imagination with strong ethical and cultural foundations. Experiential learning is central to achieving this vision, as it promotes critical thinking and problem-solving through real-world challenges. It aligns with the NEP 2020's emphasis on reduced syllabus content and focuses on essential skills. Furthermore, EL naturally supports a multidisciplinary approach, allowing students to integrate knowledge across diverse subjects and foster holistic development beyond academic achievements. It also plays a vital role in vocational training, developing crucial non-cognitive skills through practical, child-centric approaches. EL will also be instrumental in integrating India's rich cultural heritage and multilingualism to create a comprehensive and vibrant educational experience.

Studies in the field of pedagogy highlight the importance of EL to create an educational environment where students are motivated to engage and participate in their learning through experience. The generative and

transformative potential of integrating experiences in the learning process needs to be considered as a strong pedagogical practice.

This article also presented the need, practicality, and significance of Kolb's Experiential Learning Model through the school stages as emphasized by NEP 2020. EL makes education more engaging and holistic. For young children, EL leverages their natural curiosity and sensory engagement to foster foundational literacy and numeracy. As students progress to middle and secondary stages, EL evolves to develop critical thinking, problem-solving, and abstract reasoning through activities like puzzles, coding, and project-based learning. NEP 2020 encourages continuous integration of EL, including sports, vocations, and arts, and provides provisions for gifted students as well by allowing specialized engagement through clubs, circles and inter-school collaboration. This approach aligns with both Piaget's stages of cognitive development and Kolb's learning cycle, advocating for diverse teaching methods that engage learners through concrete experience, reflective observation, abstract conceptualization, and active experimentation, ultimately promoting deeper understanding and well-rounded individuals (Kolb, 1984).

NCF SE 2023 resonates with NEP's goal on effective pedagogy and holistic development of learners.

'Depending on the matter of study, context, and stage of the student, these effective pedagogical approaches would be of a wide range, including pedagogy that is more experiential, integrated, inquiry-driven, discovery-oriented, discussion-based, project-based, arts-based, sports-based and activity-based. Such pedagogy will not only be more effective but also more engaging and enjoyable (NCF SE, 2023, p. 19).'

NEP 2020 aims to make the education system in India second to none by 2040, by developing social, emotional and ethical capabilities of learners along with cognitive competence through all stages of education (NEP, 2020, p. 4). Integration of experiential learning and its multidisciplinary facilities makes it a sought-after avenue for classroom pedagogy to achieve this objective.

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