

ACHIEVING 21ST CENTURY SKILLS THROUGH EXPERIENTIAL LEARNING: A PRESERVICE EARLY CHILDHOOD TEACHER TRAINING MODEL

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Abstract

21st Century skills are skills that an individual possesses to achieve holistic development in order to contribute to the progress and development of the society/nation/world that he or she is part of. These are the skills that one ought to possess to think with clarity, act with purpose and deal effectively with every experience in this digitally transforming, technology enabled, fast moving world of today. If learning ought to be made meaningful, it must have a long-lasting effect on the minds of the learners. One of the ways to achieve this is through experiential learning. The 21st century abilities are mostly a result of experiential learning, which means that they are absorbed through observation, understanding, exercising, and practical experience. The current paper presents the linkages between experiential learning and achievement of 21st century skills in a preservice teacher training classroom in order to make learning that is concrete and effective and suggests a model to map the same. Excerpts of activities that link development of 21st century skills to experiential learning are suggested through these frameworks. This will help any preservice teacher educator to find linkages about how 21st century skills can be integrated into the preservice teacher training classroom using experiential learning and mapping it with the achievement of the four aspects of the Kolb's cycle. When adopted this can become one of the best ways of making a learner, especially a student teacher value its advantages and in turn cascade this learning to his/her wards who will be the future citizens of this country.

Keywords: *21st century skills, experiential learning, preservice teacher education.*

INTRODUCTION

Twenty first century skills are those skills that an individual possesses to achieve holistic development in order to contribute to the progress and development of the society/nation/world that he or she is part of. The Glossary of Education defines 21st Century Skills as follows: “*The term 21st century skills refer to a broad set of knowledge, skills, work habits, and character*

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traits that are believed—by educators, school reformers, college professors, employers, and others—to be critically important to success in today’s world.” These are the skills that one ought to possess to think with clarity, act with purpose and deal effectively with every experience in this digitally transforming, technology enabled, fast moving world of today. If learning ought to be made meaningful, it must have a long-lasting effect on the minds of the learners. One of the ways to achieve this is through experiential learning. The current paper presents the linkages between experiential learning and achievement of 21st century skills in a preservice teacher training classroom in order to make learning that is concrete and effective and suggests a model to map the same. When the student teacher appreciates the value of experiential learning, she/he would not only value such learning but also be in a position to cascade this learning to their students in an effective manner.

21st century skills in the educational context?

Skill-based education is the need of the hour. Whilst teachers of the past could gauge the professional trajectory of their students to a great extent, it seems blurred with the present generation. It is now quite a well-known fact that we as educators are not aware of the kind of jobs that are going to be available in the future. Andreas Schleicher, OECD Education Directorate, 2016 explains the need for 21st century skills as given below: *“Today, because of rapid economic and social change, schools have to prepare students for jobs that have not yet been created, technologies that have not yet been invented and problems that we don’t yet know will arise.”* In that perspective, it is important to understand 21st century skills. 21st century skills are skills that are balanced along with sound knowledge through engaging learning experiences. Such effective experiences bring the real world into the classroom and the classroom into the real world. This is easier said than done as it requires adopting and adapting newer ways of teaching, relooking at words like “classroom”, “teacher” and even “student” and accelerated professional development. In today’s context the role of technology in learning is something that needs to be given utmost importance (Soule & Warrick, 2015).

Several institutions and international organisations have proposed multiple frameworks and clearly outlined the competencies required to address the 21st century skills which are illustrated below. Figure 1 is an illustration of the theoretical framework with regard to 21st century skills and competencies.

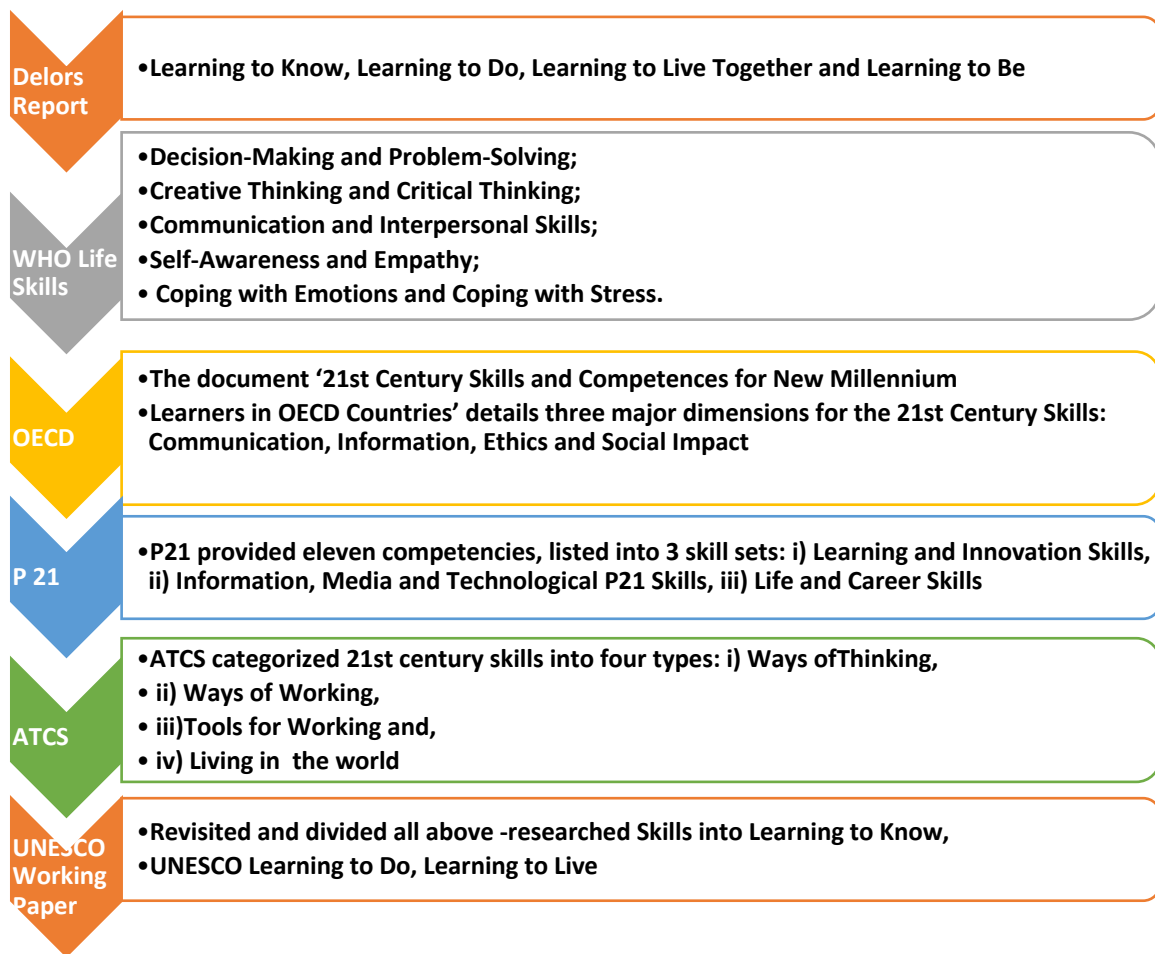


Figure 1. Illustration of the Theoretical Framework leading to the Development of 21st Century Skills Adapted from UNESCO’s Working Paper

What are the 21st century skills?

21st century skills comprise of the 3 Ls – *Learning Skills, Literacy Skills and Life Skills*. Learning Skills further comprise of the 4Cs: *Critical Thinking, Creativity & Innovation, Collaboration, Communication*.

Literacy Skills comprises of: *Information Literacy, Media Literacy, Technology Literacy*.

Life Skills also called FLIPS denotes *Flexibility and Adaptability, Leadership and Responsibility, Initiative and Self-Direction, Social and Cross-Cultural Interaction*.

The Central Board of Secondary Education in their handbook on 21st Century Skills (2020) clearly state the characteristic of each skill and how these skills can be honed in any classroom.

1. **Critical thinking** involves logically assessing information to make informed decisions.

2. **Creativity** empowers people to see concepts in a different light, leading to innovative thinking and problem solving.
3. **Collaboration** involves multiple people working together to achieve a common goal.
4. **Communication** is the practice of conveying ideas by using a variety of methods.
5. **Information literacy** gives your students the tools needed to distinguish fact from fiction.
6. **Media literacy** helps students analyze media and understand potential issues that can arise when using digital tools.
7. **Technology literacy** involves students understanding different applications and the best ways to use them.
8. **Flexibility and adaptability** are someone's ability to adapt to change and understand differences in views that impact decisions. Flexibility is the person's ability to change his actions and steps depending on the situation, facing new situations without compromising on ethics and values.
9. **Leadership and responsibility** involve someone's ability to influence and guide others towards a common goal. Responsibility towards oneself, towards the nation. Being aware of the fundamental rights is crucial in taking up leadership and responsibility.
10. **Initiative and self-direction** sometimes called intrinsic motivation, relates to students starting projects, creating plans, and executing strategies on their own. Goal setting – both tangible and intangible, utilising time effectively, independent work plans, becoming self-directed learners, achieving mastery in a task, being lifelong learners and being introspective in nature.
11. **Productivity** measures how well someone is able to prioritize, plan, and manage their work. Being ethical and being professional with time management skills, collaborative skills, punctual, patient and being accountable.
12. **Social and cross-cultural interaction** refer to the skills needed to interact effectively with others, especially when working with a diverse group of people. Understanding varied perspectives and being a good team player are important. Respect for others' views is another important aspect that ought to be developed in all learners.

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The Association for Experiential Learning defines Experiential learning as a philosophy and methodology used by educators to engage with students in a manner that emphasizes on direct

experiences and concentrated reflection leading to the development of knowledge, skills and also interpret the related values. The theory of Experiential Learning suggested by David A. Kolb provides an approach that accentuates the need for an adequate foundation towards learning and development. When adopted, this method of learning helps a learner to only understand but also allow him/her to take control of his/her learning and development along with an improvement in performance. According to David A. Kolb “There are two goals in the experiential learning process. One is to learn the specifics of a particular subject, and the other is to learn about one’s own learning process” (www.niu.edu).

Benefits of Experiential Learning

- Enhanced understanding of the curriculum.
- Developing a global perspective and fostering a sense of community.
- Development of knowledge of one's own abilities, interests, passions, and values.
- Fostering opportunities to collaborate with other organisations and individuals.
- Enhancement of professionalization, competencies and skill sets.
- Deriving satisfaction from supporting society's needs in a small but independent way.
- Enhancing a person's self-assurance and leadership abilities (Kent State University, n.d.).
- The Institute of Experiential Learning (2021) relates the cycle to different approaches or styles of learning. According to the institute, David Kolb's above experiential cycle outlines the learning process in four parts, which are repeatedly practised in all exchanges and experiences. Figure 2 is the representation of Kolb’s Cycle of Experiential Learning.

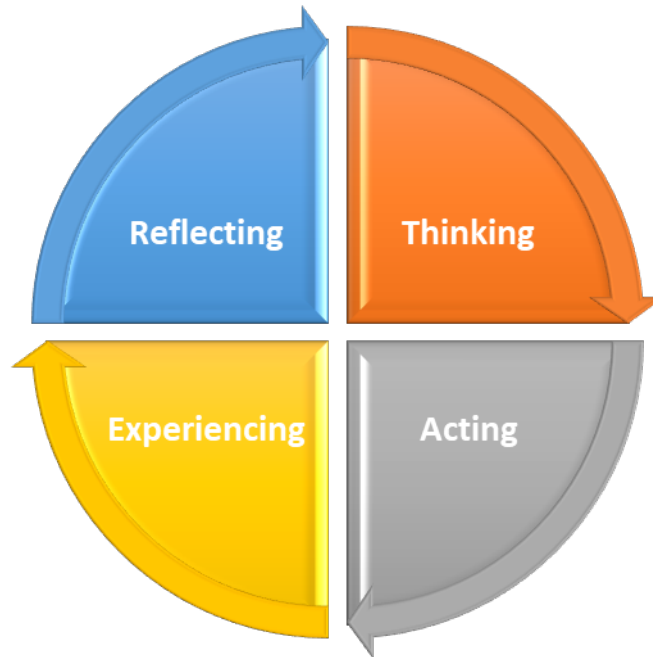


Figure 2. *Kolb's Cycle of Experiential Learning*

People participate in this very natural cycle without recognising that they are doing so in order to learn something new. Depending on their personalities, educational backgrounds, professional responsibilities, cultural background, and other factors, various people employ the cycle in different ways. The nine approaches or learning styles to employ the learning cycles are explained by the Kolb Experiential Learning Profile (KELP). Here is a list of them: Experiencing, Imagining, Thinking, Deciding, Acting, Taking Initiative, and Balancing. These styles offer guidelines that make it easier to understand people who have diverse personal styles, Knowledge of our own and others' learning preferences.

Nexus between Experiential Learning and 21st century skills

The 21st Century abilities are mostly a result of experiential learning, which means that they are absorbed through observation, understanding, exercising, and practical experience. Thinking skills instruction has been proposed by Ackerman and Perkins (1989) as a "meta-curriculum" along with primary subjects. Students would receive a far more cohesive set of learning experiences; they would understand why different "skills" were being taught, and they would be more equipped to mobilise themselves to make sense of the curriculum information.

Keeping these frameworks in mind, the authors have developed a framework that can integrate Experiential learning and 21st century skills with excerpts of activities that can be carried out in a preservice teacher training classroom. Table 1 represents the linkages.

Table 1. Linkages between Experiential Learning, Development of 21st Century Skills leading to Advancement of Relevant Preservice Training Activities

Sl.	Principles of Experimental Learning	21 st Century Skill that can be developed	Examples of activities that can be carried out at a preservice training institute to foster the principles
1.	When carefully selected experiences are accompanied by reflection, critical analysis, and synthesis, experiential learning happens.	Critical thinking Creativity & Innovation Technology literacy	Internship, Workshops, peer evaluation, Project and lesson evaluation, Field visits, Self-reflection assignments.
2.	Experiences are designed to make the learner take charge, make choices, and take responsibility for the outcomes.	Initiative & Self direction Leadership & Responsibility Critical thinking	Internship, Group projects, Presentations, Community Outreach activities.
3.	The learner actively participates in asking questions, looking into things, trying things out, being interested, working through issues, taking charge, being imaginative, and creating meaning throughout the experiential learning process.	Communication Information literacy Critical thinking Creativity & Innovation Leadership & Responsibility Information and Media literacy	Movie/Video analysis and critiquing, Project work – both individual and group, creative teaching resource preparation from aids to worksheets, lesson planning and demonstration and event organization and management.
4.	Students are involved physically, intellectually, emotionally, socially, and/or spiritually. The perception that the learning task is authentic is produced by this involvement.	Collaboration Flexibility and adaptability Social & Cross-cultural interaction Critical thinking	Workshops aimed at attitudinal changes, developing sensitivity, goal setting, kinesthetics, games and sports. Group work and presentation.

5.	Personal learning outcomes serve as the foundation for further experience and education.	Initiative and self-direction Critical thinking	Self-evaluation and peer evaluation of lessons and projects, Focussed Discussions.
6.	Student-to-self, student-to-other, and student-to-world relationships are all established and nourished.	Social & Cross-cultural interaction Flexibility and Adaptation Collaboration Communication Critical thinking	Microteaching sessions, Community outreach activities Institutional Social Responsibility activities Events that can link culture and celebrations, values, practices and scientific connections.
7.	Because the results of the experience cannot be completely predicted, the instructor and student may encounter success, failure, adventure, taking risks, and uncertainty.	Critical thinking Initiative and self-direction Flexibility and adaptability	Reflection after each event, peer and project evaluation Self-evaluation after every lesson during microteaching sessions and presentations, group discussions.

Representation of a model mapping activities aimed at developing 21st century skills and experiential learning in a preservice teacher training course

The authors have also illustrated a practical example of how 21st century skills can be integrated into the preservice teacher training classroom using experiential learning and mapped it with the achievement of the four aspects of the Kolb’s cycle. The list of 21st century skills were made and relevant activities to foster them were designed. This was then mapped to each stage of the Kolb’s Experiential learning cycle. Figure 3 is a representation of the mapping between 21st century skills and experiential learning.

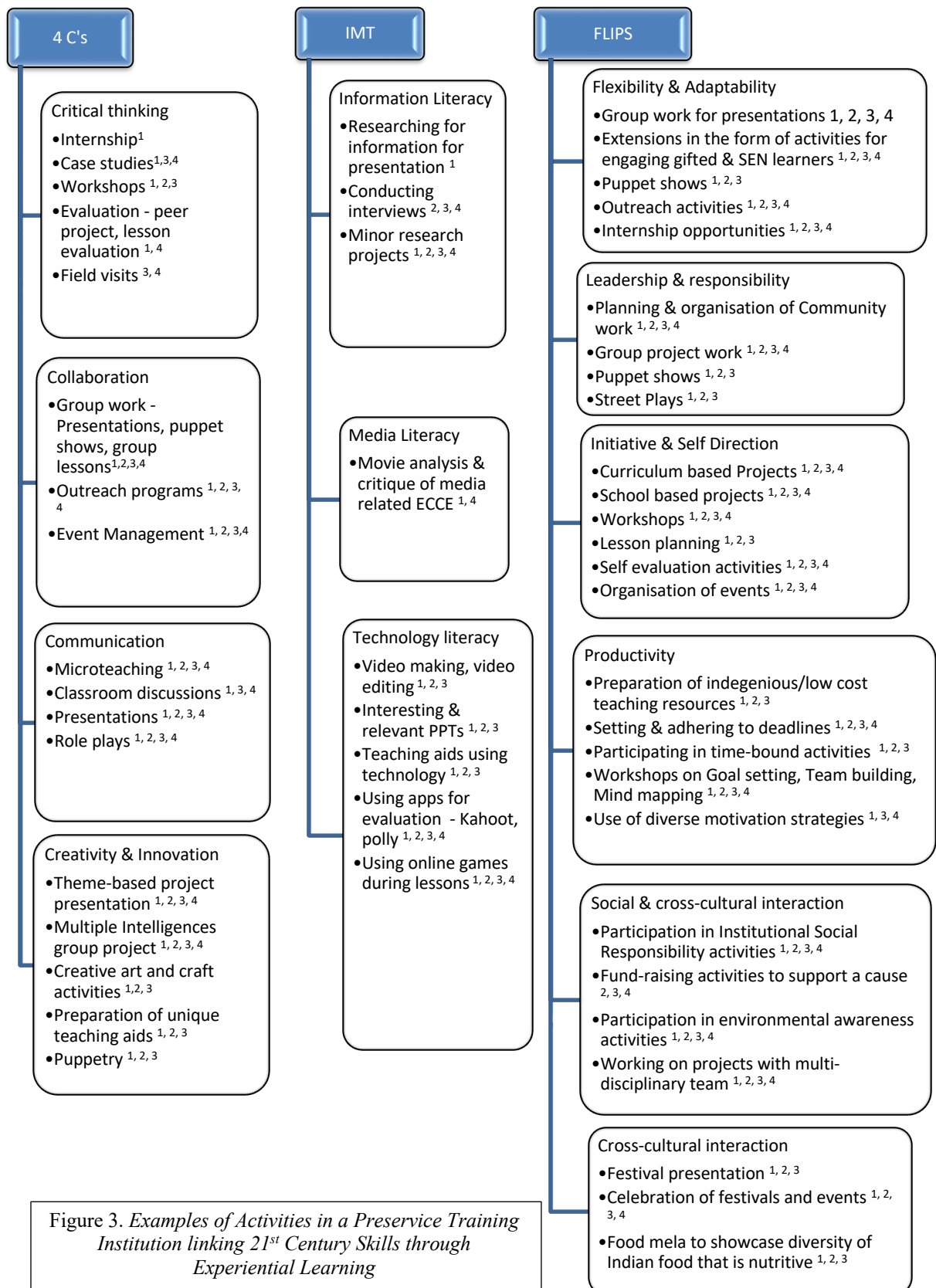


Figure 3. Examples of Activities in a Preservice Training Institution linking 21st Century Skills through Experiential Learning

Note: ¹ represents Learning at thinking level, ² represents learning at acting level, ³ represents learning at experiencing level and ⁴ represents learning at reflecting level

Characteristics to be developed in 21st Century Teachers

Palmer (2015) states 15 characteristics to be developed in 21st century teachers which are as follows:

1. Learner-centered classroom and personalized instruction.
2. Students as producers – Let them own what they do (term-papers/assignments/ work that is creative)
3. Learn new technologies
4. Go global
5. Be smart and use smartphones
6. Blog
7. Go digital – Own website
8. Collaborate
9. Use Twitter chats
10. Connect
11. Project-based learning
12. Leave a positive digital footprint
13. Code
14. Innovate
15. Be a life-long learner

A preservice teacher training institute thus ought to keep these characteristics in mind and design curriculum that helps in the development of a teacher who is aware of the 21st century skills and adopts experiential learning in her classroom.

Possible threats in twenty first century education

Education and learning in the 21st century are becoming more demanding and intricate, posing great challenges. The students must match the development that is happening rapidly every day. Upgradation of Knowledge and skills need to be constant along with being able to use the learning on actual world circumstances if the students want to sustain the future.

Given below are few threats that the 21st century learners need to work on:

1. Matching to the constant developments happening around them.
2. Developing learner's critical thinking and problem-solving abilities to fathom and
3. manoeuvre through real-time situations.

4. Being able to implement the learning into action.
5. Use of collaborative approaches may not be possible at all times.
6. Awareness of the fact that learning does not end with just gaining knowledge.

CONCLUSION

The Experiential Learning movement, which originated in the middle of the nineteenth century in the United States, tried to move away from formal education and towards an approach based on experiences. With the addition of laboratories, applied studies, and clinical experiences, it attempted to shift the teachers-talk, students-listen strategy to a more involved one. The 20th century saw the addition of off-campus experiences alongside traditional classroom learning. It began to gain popularity gradually and is now making its way into the mainstream educational systems of several nations. Experiential learning offers a comprehensive representation of the learning process that is compatible with what is known about how people learn and develop. Experiential learning is becoming more and more popular among educational institutions and policymakers, and it is seen to be essential to the progress of education because of its many advantages, including:

1. **Real World Adaptation** - Experience makes it simpler to understand the facts that surround us. For instance, students who comprehend the concepts of heat and cold can also comprehend the concept of touch, and they can continue to deepen their comprehension of these fundamental ideas to develop new ones.
2. **Higher levels of participation** - Students are encouraged and motivated to participate in and engage in the application of theoretical concepts when there is a focus on experience and practise. As a result, learning levels are high in comparison to a conventional textbook reading lesson.
3. **Improves Learning Outcomes** - During the process of experiential learning, students practise critical thinking, develop their ability to solve problems, and make decisions. These situations force students into a real-world setting, which strengthens their emotional and cognitive perspectives.
4. **Improvement in Knowledge Retention** - Students can learn effectively when the material is connected to their values and emotions. Each student's learning and understanding is

influenced by their prior experiences, which leads to unique outcomes that make learning more lasting and personal.

5. Builds Life Skills - Lifelong skills are developed through experiential learning. Experiential learning aids in the development of fundamental abilities and motivates students to ponder, conceptualise, and plan for the future (Temurnikar, 2019).

These benefits that are envisaged by experiential learning can be related to the achievement of 21st century skills which is the need of the hour. Working towards achievement of the 21st century skills by incorporating and integrating experiential learning into the curriculum is one of the best ways of making a learner, especially a teacher value its advantages and in turn cascade her learning to her wards who will be the future citizens of this country.

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