

## **PROSPECTS OF PROJECT BASED LEARNING TOWARDS EXPERIENTIAL LEARNING**

Dr. Sharmila L Mascarenhas<sup>1</sup>

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### **Abstract**

*Learning is a process of providing hands – on - experience to the learner wherein the learner engages in learning by doing. In this practice, learners are in a better position to establish an association between the theoretical and classroom learning to real life situations. The traditional approaches of teaching and learning focus on gathering factual information and rote memorization. These abilities may not help a learner to get themselves adjusted with the modern-day problems and find solutions to them. The 21<sup>st</sup> century skills along with the fundamental skills of reading, writing and arithmetic are essential to be developed in every learner. This paper discusses the opportunities of Project Based Learning in the process of teaching and learning and how it provides Experiential Learning.*

**Keywords:** Project Based Learning, NEP 2020, Experiential Learning.

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### **INTRODUCTION**

With a purpose of achieving the Sustainable Development Goal of providing quality education and promoting learning through various opportunities by the year 2030, the National Education Policy addresses the various issues of revamping and revising the existing structure and the system of education in our country. This policy envisages the development of creative potential of every learner and at every stage of learning along with advancement in the cognitive and creative capacities. The learners must be able for critical thinking and problem solving, deviate from discipline-based approaches and must have the potential to adapt and assimilate themselves into emerging fields. Pedagogy should be Experiential and provide opportunities for discussion and inquiry-based approaches. There should be scope for flexibility and learner centeredness by following a holistic approach. Experiential Learning is one of the significant strategies that follow a holistic approach in the learning process.

The Experiential Learning Theory was published by David A Kolb in 1984 based on the principles of Gestalt psychology. Experiential learning opportunities provide a holistic

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<sup>1</sup> Assistant Professor, St Ann's College of Education, Mangaluru

perspective that includes Experience, Perception, Cognition and Behaviour. Experiential Learning provides with an opportunity to the learners to have a better and broader understanding of the subject matter. It also helps them to identify their potential in the context of interests, skills and values. Developing leadership and self-esteem are highly possible due to experiential learning. The approach towards Experiential Learning involves multiple strategies where learners take a primary position in the process of learning and gain first hand experiences which are subject to feedback, evaluation, reflection, contemplation and modification of the learning experiences.

Project Based Learning (PBL) is one of the strategies of Experiential Learning. It is a student-centred form of instruction which is characterised by learners' autonomy, constructive investigations, goal-setting, collaboration, communication and reflection within real world practices. Learners also become active in this process.

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Project-based learning is an overall approach to the design of learning environments. Learning environments that are project-based have five key features (Blumenfeld et al., 1991; Krajcik, et al.,1994; Krajcik, Czerniak, & Berger, 2002)

1. There will be a question or a problem that needs to be solved
2. The question or problem is analyzed by brainstorming ideas and exploring.
3. The facilitators and learners engage themselves to identify solution to the problem by collaborative activities
4. During the process of inquiry, scaffolding is provided to the learners in tasks that are beyond their comprehension and capability.
5. The solution to the question or the problem is constructed.

Project Based Learning is more related to Situated Learning. In this form of learning, learners use their ideas to construct knowledge for themselves and thus possess an in-depth understanding of the learning material. Students go through stages of Inquiry, questioning, formulation of hypotheses, discuss and challenge ideas of themselves and that of others and

also come up with innovative ideas as solutions for meaningful problems. Research has shown that learners achieve better in Project Based Learning Classroom and get higher scores than the traditional classroom approach. (Marx et al., 2004; Rivet & Krajcik, 2004; William & Linn, 2003).

## **THEORETICAL BACKGROUND OF PROJECT-BASED LEARNING**

Project Based learning has its base in the ideas of the great educationist and philosopher John Dewey. There are four major aspects associated with Project Based Learning (Joseph S. Krajcik, 2006).

- Active Instruction – Learners construct knowledge based on their experiences
- Situated Learning – Learning takes place in daily life situations
- Social Interactions – Learning takes place by interaction with peers and others involved in the process of Learning
- Cognitive Tools – Use of a variety of thought processes for learning and demonstration of information, with due prominence to information technology.

## **REVIEW OF RELATED STUDIES ON PROJECT BASED LEARNING AND OTHER RELATED VARIABLES**

Barbara King & Carmen Smith (2020) made a study on ‘Using Project-Based Learning to Develop Teachers for Leadership’. In this study the in-service teachers had to develop a course on Mathematics Education and lead a full day professional development programme for local school teachers. This experience helped the teachers have a vision of themselves as leaders.

Petri Vesikivi and others (2020) in their study on the impact of project-based learning curriculum on first-year retention, study experiences, and knowledge work competence showed that Retention rate was substantially improved compared to previous years and student collaboration and independence were found to increase overall satisfaction and to enhance learning in project teams.

Safaruddin (2020) and others made a study on ‘The Effect of Project-Based Learning Assisted by Electronic Media on Learning Motivation and Science Process Skills’. The quasi-experimental design was adopted and the study revealed increased Learning Motivation taught with the Project Based Approach compared to the traditional approach that was teacher centered.

Morrison, J., Frost, J., Gotch, C. *et al.* (2020) made a study on the ‘Teachers’ Role in Students’ Learning at a Project-Based STEM High School: Implications for Teacher Education’. The study highlighted on how teachers could support learning experiences in a Project Based Learning environment. Three critical elements of the teachers’ supports and challenges were identified such as student-centred projects, a focus on twenty-first century competencies and strong teacher-student relationships. This paved a way to find recommendations for teacher preparation programmes such as providing preservice teachers with authentic experiences, contemplating about failure and considering it as a part of learning, inclusion of project-based learning pedagogy and stressing twenty-first century competencies.

Cheng-Huan Chen and Yong-Cih Yang (2019) in their study on ‘Revisiting the effects of project-based learning on students’ academic achievement: A meta-analysis investigating moderators’, the results showed that project-based learning has a medium to large positive effect on students’ academic achievement compared with traditional instruction affected by subject area, school location, hours of instruction and information technology support.

Abdul Syakur (2017) in his study stressed that Project Based Learning is an educational approach emphasizing creativity, Problem solving abilities and knowledge creation through interaction. In his study to *determine the Effect of Project Based Learning continuous learning innovations on English learning outcomes of students of the faculty of cultural sciences English Education study programs at Brawijaya University Malang revealed that Project Based Learning based learning can improve Student Learning Outcomes.*

Dimitra Kokotsaki, Victoria Menzies, Andy Wiggins (2016) made a review of the research on Project Based Learning. The majority of the reviewed studies were based on a quasi-experimental pretest–posttest design. No proper random sampling techniques were implemented to classify participants into experimental and control groups. Modern digital technology, group processes of high quality, teachers’ ability to effectively scaffold students’ learning and provide guidance and support, the balance between didactic instruction with in-depth inquiry methods and well-aligned assessment were the variables associated as facilitating factors in the implementation of Project Based Learning.

Stavroula Kaldi (2011) made a study on ‘The Effectiveness of Project-based Learning on primary school pupils regarding their content knowledge and attitudes towards self-efficacy, task value, group work, teaching methods applied and peers from diverse ethnic backgrounds.

A cross-curricular project was implemented within the curriculum. The findings of the study revealed that that pupils can gain benefits through project-based learning in obtaining content knowledge and group work skills experiential learning was more favourable to traditional learning.

Stephanie Bell (2010) mentioned that Project-Based Learning (PBL) is an innovative approach to learning that teaches a multitude of strategies critical for success in the twenty-first century. Through this approach there is inquiry in learning and learners work in collaboration leading to reflection of their work. They develop the skill of communication and problem-solving abilities in them along with proficiency in technology.

Gokhan BAS and Omer Behyan (2010) in their study on Effects of Multiple Intelligences supported Project Based Learning on Students' Achievement levels and attitudes towards English Lesson revealed that Multiple Intelligences Supported Project Based Learning have a higher level of motivation and showed better academic achievement compared with the traditional methods of instruction.

Phyllis C. Blumenfeld and others (1991) made a study on Project Based Learning Approaches and reasoned that this approach engages a learner in investigating reliable problems. They also emphasised on increasing the motivational level of the learner along with creating a thought process.

It is evident from the above research findings that Project Based Learning have yield positive outcomes in the context of Achievement and increasing the motivational level of students. Studies have also proved that working in collaboration was successful in achieving the purpose of Project Based Learning.

#### **IMPLICATIONS AND FURTHER SCOPE OF PROJECT BASED LEARNING**

- Project based Learning will promote inquiry mindedness in learners. Hence teachers and facilitators must provide opportunities to learners to develop the spirit of questioning from the early developmental stages.
- There are various opportunities collaborative learning. Group projects will create greater prospects for team work and developing nurturant effects with respect to the affective domain.

- Development of Scientific Attitude by sharing ideas and accepting others ideas. Learners will develop an attitude of broad mindedness and have the willingness of mutually sharing ideas and finding solutions to their problem in hand.
- Daily life situations will make a path to identify questions for Project Based Learning. Teachers must encourage learners to recognize situational problems and take the as challenges.
- Curriculum planners must provide opportunities for conducting Project Based Learning in all the disciplines possible and clear cut guidelines for both teachers and learners are essential.

## CONCLUSION

Project Based Learning is a strategy of Experiential Learning that keeps learners engaged in the Teaching learning Process. Learners are withdrawn from the superficial learning of rote memorization and concentrate more on application of daily life problems by finding solutions to them. Hence it is the prime responsibility of the system of education to include Project Based Learning in the process of Curriculum development and subsequently contribute towards Experiential learning.

## REFERENCES

- Abd, Syakur. (2017). Education For Sustainable Development (ESD) Sebagai Respon Dari Isu Tantangan Global Melalui Pendidikan Berkarakter Dan Berwawasan Lingkungan Yang Diterapkan Pada Sekolah Dasar, Sekolah Menengah Dan Kejuruan Di Kota Malang. 1(1), 37–47.
- Barbara, King., & Carmen, Smith. (2020). Using Project-Based Learning to Develop Teachers for Leadership, *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, 93:3, 158-164, DOI: 10.1080/00098655.2020.1735289
- Joseph, S. K., & Phyllis, C.B. (2006). *In: The Cambridge Handbook of the Learning Sciences*. R. Keith Sawyer (ed). Cambridge University Press
- Marx, R. W., Blumenfeld, P. C., Krajcik, J. S., Fishman, B., Soloway, E., Geier, R., & Revital T. T. (2004). Inquiry-based science in the middle grades: Assessment of learning in urban systemic reform. *Journal of Research in Science Teaching*, 41(10), 1063–1080.

- Morrison, J., Frost, J., Gotch, C. *et al.* (2020). Teachers' Role in Students' Learning at a Project-Based STEM High School: Implications for Teacher Education. *Int J of Sci and Math Educ* . <https://doi.org/10.1007/s10763-020-10108-3>
- Petri, V., Minna, L., Jaana, H., & Hanni, M. (2020). The impact of project-based learning curriculum on first-year retention, study experiences, and knowledge work competence, *Research Papers in Education*, 35:1, 64-81, DOI: 10.1080/02671522.2019.1677755
- Phyllis, C.B., Elliot, S., Ronald, W. M., Joseph, S. K., Mark, G., & Annemarie, P. (1991). Motivating Project-Based Learning: Sustaining the Doing, Supporting the Learning, *Educational Psychologist*, 26:3-4, 369-398, DOI: 10.1080/00461520.1991.9653139
- Rivet, A., & Krajcik, J. (2004). Achieving standards in urban systemic reform: An example of a sixth grade project-based science curriculum. *Journal of Research in Science Teaching* 41(7), 669–692.
- Stephanie, Bell. (2010). Project-Based Learning for the 21st Century: Skills for the Future, *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, 83:2, 39-43, DOI: 10.1080/00098650903505415
- Williams, M., & Linn, M. (2003). WISE Inquiry in fifth grade biology. *Research in Science Education*, 32 (4), 415–436.