

Project-Based Learning

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Life skills are defined as “abilities for adaptive and supportive behaviors that enable individuals to deal effectively with the demands and challenges of everyday life”. These skills can help individuals in leading a meaningful life. Hence, it is of importance to consider the role schools play in equipping students with these life skills. Schools bear the responsibility of choosing the right strategies to develop these skills. One of these strategies is project-based. Project-based learning (PBL) is a teaching strategy that offers students the chance to develop real life skills. This occurs through engaging students in the cycle of PBL that requires the use of a variety of skills from the students to solve problems.

Keywords: project-based learning (PBL) ; life skills ; Sustainable education

1. Background

Today's world is constantly changing, which sometimes might leave a gap between what students learn in schools and what they actually need to survive in the real life. This puts schools under a lot of pressure to develop their educational instruction processes in an innovative manner ^{[1][2]} that help students to acquire and develop the needed life skills. Life skills are part of 21st century education skills that have been advocated and divided into three types of skills by the author of ^[3]. The first is interpersonal and collaborative skills, which focus on the learner's ability to communicate, develop positive social relationships, and collaborate with others to achieve common goals. The second type is self-directed skills, addressing the learner's ability to identify learning goals, plan to achieve them, manage their time and effort, evaluate their learning outcomes and outputs, and identify their strengths and weaknesses. The third type is the skills of reliability and collective responsibility that focus on the ability of learners to take responsibility for their own learning, and classroom learning where each individual plays a role and students' roles are integrated with each other in achieving the goal. This division seemed convincing to many educators who found that the development of these skills could be motivated by applying learner-centered strategies such as project-based learning ^[4].

2. Project Based Learning (PBL)

John Dewey, with his works focusing on learning by doing, is regarded by some researchers as the founder of project-based learning. Dewey's theories on learning advocated a life-long learning approach where learning happens when students interact during real life tasks ^[5]. However, other researchers argue that the American philosopher Kilpatrick, a Dewey's successor, is the actual founder of project-based learning. Kilpatrick defines PBL as a set of meaningful activities in a social environment that focus on a specific content or on a theme ^{[6][7]}. As such, PBL focuses on learning by doing, experimenting, problem solving, teamwork, social skills, understanding, collaboration and partnership, and taking responsibility. The previous argument confirms that both Dewey and Kilpatrick played a major role in revolutionizing education. However, this does not deny the role of Vygotsky, the pioneer of social constructivist theory, in advancing project-based learning in schools. Social constructivist theory suggests that when taking part in educational projects, learners are given the opportunity to interact with their peers, exchange ideas, and ask questions, which helps them to develop their skills and gain new knowledge.

PBL is a vital teaching method that enables the satisfaction of different factors of social constructivist theory, especially collaborative learning and teacher's scaffolding. In addition, they encourage outdoor activities. Three factors have been described in the literature as contributing to students' learning ^{[8][9][10]}, especially their autonomy and freedom to learn, to plan their learning, and to explore the content. Thus, these three factors point at project-based learning as part of sustainable education, as they lead to the development of students' life skills.

3. Project-Based Learning (PBL) as Facilitator of Life Skills

Project-based learning is consistent with different theories, such as social constructivist theory, which emphasizes that students build their knowledge by themselves when they work together with the teacher's guidance. Therefore, teachers should provide learning environments that allow students to take responsibility for their learning. Project based learning provides such environments, where students take responsibility for their learning and learn to develop their life skills through undertaking projects ^[11]. When individuals learn through social interactions when working in teams, collaborating and communicating to solve problems ^[12], they develop their life skills. Life skills are developed in these social contexts ^[13], where students take full responsibility for their learning ^[14] and learn new life skills that enhance their creativity and decrease the gap between knowledge and skills ^[15]. All of the previous points to project-based learning as a part of transformative education that leads to sustainable learning, and thus it serves students in their commitment to democratic society.

Moreover, project-based learning is consistent with multiple intelligence theory, as proposed by Gardner. Gardner differentiated the intelligences of learners and highlighted that all humans possess eight types of intelligence that are manifested in different skills and competencies; therefore, individuals learn differently to one another. Project-based learning accommodates different styles of learning by including different tasks.

4. Project-Based Learning, Life Skills, and Transformative Environmental and Sustainability Education

Project-based learning and life skills could be related to transformative environmental and sustainability education. Bivens, Moriarty, and Taylor ^[16] argue that access to transformative education has a key role in overcoming the poor opportunities of marginalized children in society. Project-based learning constitutes an environment in which transformative education can occur as it provides a context for children to express their ideas, to plan, and to carry out their plans, in addition to looking back and trying to improve upon their initial plans. This is especially true in a context such as the Palestinian one, where a proportion of students are of low and middle socio-economic status. Walshe ^[17] report that an interdisciplinary approach encourages environmental and sustainability education. Besides, project-based learning could provide context for interdisciplinary learning ^[18], which points to it as encouraging sustainability education. Moreover, Öhman and Sund ^[19] propose a model that frames sustainability commitment. This model takes care of the intellectual, the emotional, and the practical aspects. It could be argued that project-based learning takes care of the three aspects, which suggests that project-based learning is related to a sustainability commitment. Furthermore, Fortune et al. ^[20] say that project-based learning constitutes a context in which university students experience transformative learning as they navigate a cultural learning journey, which results in the emergence of new insight into their own and others' subjective world views.

In addition to the facilitation of transformative education by project-based learning, transformative education could cultivate life skills. Lavrysh ^[21] argues that transformative learning is a factor that leads to the adoption of life-long learning. We argue that life-long learning interrelates with life competencies and skills. Anand and Anuradha ^[22] describe life skills as enhancing efforts to positively develop/change behavior related to healthy functioning in society. They found that it could provide education for the sustainable future of adolescent girls.

All of the previous literature emphasizes that project-based learning and life skills could be an important part of transformative environmental and sustainability education. This is specifically true of language education.

5. Project Based Learning in the Language Classroom

Researchers in language education are interested in factors that promote the development of language skills in general (e.g., ^{[23][24]}), and life skills in particular (e.g., ^[25]). Project-based learning could be one of these factors as, according to social constructivist theory, learning a language is a social and dynamic process that emphasizes the occurrence of learning when learners interact with each other. Therefore, PBL has a high probability of succeeding when used to teach and learn languages ^[26]. PBL works through the integration of language skills when students use the language to negotiate an authentic and real-life problem, as well as through working in groups and communicating to solve these problems. These activities provide students with opportunities to employ language in and outside the classroom and thus increase students' language fluency ^[27]. In addition, the involvement of students in a mission that requires them to discover the proper use of language in different social situations, such as giving written and oral presentations, provides opportunities to demonstrate students' abilities to put their knowledge into practice ^[28].

PBL focuses on achieving the main goals through enabling students to reproduce languages, develop different skills, and apply and adapt what they already know ^[26]. Through this reproduction, students develop their knowledge and skills to incorporate language learning and inter-cultural understanding in order to connect learning to the real-world ^[29]. All of the previous, again, points to project-based learning as encouraging the development of life-skills, and thus encouraging sustainable education.

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