

Chapter 7

Implementing Online Project–Based Learning: Opportunities for Social Capital Development

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ABSTRACT

This chapter examines the relationship between online Project-Based Learning (PBL) and social capital development, tracing the historical roots of PBL from learning by doing and experiential learning to modern implementations supported by digital platforms. It highlights how PBL, grounded in student-centered, real-world projects, fosters deep learning and critical thinking. As PBL has evolved, the integration of AI technology offers new tools to enhance learning but also introduces ethical challenges that must be carefully managed. The chapter emphasizes that building social capital – through trust, collaboration, and community engagement – is essential for the success of online PBL. It discusses strategies for overcoming the challenges of diverse student backgrounds and real-world complexities, focusing on the importance of ethical AI use and inclusive practices. Ultimately, this chapter underscores the potential of online PBL to not only enhance academic outcomes but also contribute to stronger, more resilient communities through the development of social capital.

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INTRODUCTION

History of PBL

“Confucius and Aristotle were early proponents of learning by doing. Socrates modeled how to learn through questioning, inquiry, and critical thinking - all strategies that remain very relevant in today's PBL classrooms” (Boss, 2011, para. 3). In the 20th century, John Dewey has been credited for laying the groundwork for PBL. He has been recognized as one of the early promoters of project-based education or at least its principles through his idea of “learning by doing” (Bender, 2012). John Dewey advocated for experiential education, emphasizing the importance of learning through experience, reflection, and integrating real-world tasks into the curriculum for PBL. Following his suit, Kilpatrick further developed the idea of project-based learning. He built on Dewey’s theory and introduced the project method as a component of Dewey’s problem method of teaching (Beckett & Slater 2019). In his influential essay, “*The Project Method*”, Kilpatrick outlined an instructional method where students work on a purposeful project related to their interests (1918). He emphasized student autonomy and the value of projects in making learning more meaningful. Later research studies have further enriched the PBL with various components to make it more vibrant and effective by incorporating different focuses, such as Montessori’s educational approach, which focused on student-centered, hands-on learning, also contributed to the development of PBL. The Italian physician, Maria Montessori launched an international movement during the 20th century with her approach to early-childhood learning (Boss, 2011). A Montessori classroom emphasizes hands-on learning and developing real-world skills (Jones, 2020). Vygotsky’s sociocultural theory, particularly the concept of the Zone of Proximal Development (ZPD), has been influential in PBL. Vygotsky’s sociocultural theory of cognitive development emphasizes the importance of the social and cultural context in which learning occurs (Leo, 2023). Vygotsky believed that learning is culturally dependent and that different cultures shape how people learn, and educators should consider the effects of culture on the learning environment.

In the modern era’s implementation of PBL, the Buck Institute for Education (BIE) has been a leading advocate for PBL. The BIE defines PBL as “Project Based Learning (PBL) as a teaching method in which students learn by actively engaging in real-world and personally meaningful projects” (BIE, Homepage). New Tech Network defines PBL as “Project-based learning (PBL) is an inquiry-based and learner-centered instructional approach that immerses students in real-world projects that foster deep learning and critical thinking skills” (No date, para. 3). The definition varies in different research studies with enhanced focuses; however, the key points stay the same, which are student-centered learning and real-world projects. PBL

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