Chapter 12
Constructing Human Service Learning in the AI Digital Sphere
China's Case of LivePBL DEEP Method

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ABSTRACT

Service learning, a critical pedagogy combining community service with academic goals, fosters civic engagement, practical skill development, and social responsibility. This chapter explores how integrating Gen AI can enhance project-based service learning to address real-world social challenges in higher education (HE). Despite its rapid growth in HE, Gen AI still faces limitations, particularly the lack of a human-centred design method that reflects real-world contexts and the risk of oversimplifying complex tasks, leading to a more automated, less humanised learning process. The DEEP method, structured upon four co-designing phases—direction, education, event, and project—offers a hybrid solution, creating an adaptable and scalable framework for constructing a project with Gen AI for co-designed, social, and personalised learning. The chapter also illustrates the LivePBL project, piloted to train pre-service teachers in China, demonstrating how the method can effectively

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integrate Gen AI with hands-on co-design to enhance the learning environment and societal exchange.

INTRODUCTION

Service Learning (Jacoby, 1996) is a pedagogical strategy that combines academic objectives with community service to enhance real-world learning outcomes and address social challenges (García-Rico et al., 2021; Giles & Eyler, 1994; Kezar & Rhoads, 2001; Marco-Gardoqui et al., 2021; Salvador-Garcia et al., 2023). This approach is grounded in experiential learning theory, which believes knowledge is constructed through direct experience and reflection. Service Learning originated in the United States during the 1960s and 1970s with a broader movement towards community involvement and social responsibility in education (Stanton et al., 1999). The foundational principles emphasise exchange and reflection, ensuring that both the community and the students benefit mutually from the collaboration.

In developed countries, Service Learning has significant impacts in fields such as teacher education (Khan & VanWynsberghe, 2020), healthcare and even agricultural studies (Drewery & Lollar, 2024), whereas developing countries have seen less integration in practice with community engagement and professional development (Choi et al., 2023; Knapp & Fisher, 2010). In China, Service Learning has increasingly been emphasized in training teacher students, particularly enhancing their civic and social responsibilities (Coelho & Menezes, 2021). This trend aligns with the national educational reforms aiming to foster holistic development and societal contributions among students. Chinese educational policies have gradually incorporated elements of Service Learning, recognising its potential to bridge the gap between academic learning and societal needs.

Since COVID-19, Service Learning faces increased pressure to meet the evolving demands of 21st-century education (Khiatani et al., 2023; van Laar et al., 2020). The pandemic has accelerated the need for digital transformation in education, prompting educators to integrate technology into Service Learning projects. There is an urgent need to promote and enhance essential skills such as creative and critical thinking, as well as problem-solving and to implement personalised, collaborative, socially engaging, and experiential learning strategies (Kraft, 2000). In response, a compelling movement exists to innovate and broaden Service Learning across various disciplines, aiming to adapt and thrive in the new education landscape (Holmes et al., 2022; Thornhill-Miller et al., 2023).

Our applied research journey began in 2020 when the COVID-19 pandemic started, and we felt an urgent need to help parents and children with digital skills. Based at the Music College of Capital Normal University in China, our international