

Integrating Generative AI into Service-Learning: Enhancing Student Learning and Financial Literacy for the Elderly Through Game-Based Activities

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Abstract

This study investigates the integration of Generative AI (GenAI) into a personal finance course at a private university in Hong Kong, aiming to enhance educational outcomes through servicelearning activities. GenAI, an advanced branch of artificial intelligence, is utilized for generating diverse educational content, including text and images. The course leverages GenAI to develop educational games focused on improving financial literacy among the elderly, addressing key topics such as saving, retirement planning, and scam prevention. Initially, students participated in workshops on game design and the application of ChatGPT. They then created interactive games to convey financial concepts. These games were implemented in service-learning projects at elderly centers. This methodology enabled students to apply theoretical knowledge in practical contexts, enhancing the elderly's financial management skills and scam awareness while promoting social responsibility among students. A mixed-method approach was employed to evaluate the project's effectiveness, incorporating both surveys and reflective assignments. Survey results indicated students' high ratings in community impact, overall satisfaction, and the effectiveness of training and support, underscoring the successful integration of AI-driven methodologies into educational frameworks. Reflective assignments provided deeper insights into students' critical assessment of their learning experiences, highlighting enhanced understanding and practical application of financial principles. The primary objective of this research is to assess the efficacy of integrating GenAI into educational activities to improve student learning outcomes and community impact. The findings suggest that the combination of GenAI and service-learning significantly enriches educational experiences, equipping students with essential skills and preparing them for responsible citizenship.

Keywords: Generative Artificial Intelligence; Financial Literacy; Service-Learning; Gamebased Learning; Community Impact