

Empowering The Learner: The Role of Perceived User Agency in Preparing Students for Self-Directed Tasks in A GP Tutor-Integrated Flipped Classroom

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Abstract

With the rapid evolution of Generative AI (GenAI), higher education instructors are increasingly exploring pedagogical models that leverage this technology to enhance student learning. One such application within a business school in Hong Kong is the adoption of GP Tutor, a GenAI chatbot, designed to prepare students for self-directed tasks integrated within the flipped classroom environments. Drawing from the Technology Acceptance Model (TAM) and the construct of Performance Expectancy, this study adopted 13 statement items to measure students' initial readiness before they engaged with the assigned learning tasks. Data were collected from a sample of 117 undergraduate and postgraduate students across the 2024/2025 and 2025/2026 academic cohorts. An exploratory factor analysis identified two key dimensions: Perceived User Agency, which captures ease of use and learner confidence, and Perceived Learning Usefulness, which focused on the perceived benefits such as a streamlined learning experience and higher-order thinking skills. Reliability testing yielded Cronbach's Alpha coefficients of .856 and .756, respectively, both demonstrated acceptable internal consistency. Regression analyses revealed that both factors are significant positive predictors of students' behavioral intention to use the GP Tutor. Notably, Perceived User Agency exerted a stronger influence on intention than Perceived Learning Usefulness. These results suggest that merely emphasizing the utility of technology is insufficient. To enhance flipped classroom effectiveness, instructional strategies should empower students to manage their own learning progress by leveraging educational technology. Providing structured pre-training is also essential to bolster their technical proficiency and confidence in using GP Tutor for self-directed learning tasks.

Keywords: educational technology; flipped classroom, GenAI chatbot; GP tutor; higher education