

The Effects of AI-Assisted Project-Based Learning on VSTEP Writing Proficiency and Learner Autonomy

Generative Artificial Intelligence offers the potential to foster independent learning while empirical evidence on its structured pedagogical application in Vietnamese standardized test preparation remains limited. This study examines the impact of integrating a generative AI tool (Gemini Story Book) within a project-based learning framework on VSTEP students' writing proficiency and explores learners' cognitive processes and practical challenges. This study employed a quasi-experimental design with convenience sampling, involving two intact VSTEP preparation classes with 30 students each. Thirty students were assigned to the treatment group, attending a VSTEP preparation class integrating Gemini Story Book within a project-based learning framework, while the other thirty formed the comparison group, following the standard instructional approach. Standardized pre- and post-tests, along with semi-structured interviews with six students after the intervention, were used to collect data. Preliminary findings indicate that students in the treatment group demonstrated greater overall improvement in writing performance than those in the comparison group, with stronger gains observed in lexical diversity and structural coherence than in organization and task fulfillment. In addition, learners reported increased motivation for self-directed learning, although qualitative findings highlight challenges related to prompt formulation and potential over-reliance on AI tools. The study contributes empirical evidence for the pedagogical use of AI-assisted PBL in L2 writing and offers practical implications for fostering learner autonomy in high-stakes test preparation contexts.

Key words: Generative Artificial Intelligence, project-based learning, VSTEP writing proficiency, learner autonomy, quasi-experimental design

Author: Dr LOI, Nguyen Tan (Faculty of Foreign Languages and Teacher Education, Nong Lam University Ho Chi Minh City)

Co-author: Ms PHUONG, Le Thanh Truc (Ivy English House)

Presenters: Ms PHUONG, Le Thanh Truc (Ivy English House); Dr LOI, Nguyen Tan (Faculty of Foreign Languages and Teacher Education, Nong Lam University Ho Chi Minh City)

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