

Bridging Innovation and Evidence: An Action Research Approach to Responsible AI Integration for Academic Vocabulary Development in University English Courses

Hiu Dong Poon , Angel Fan Yim Hung

Lingnan University, Hong Kong

Abstract

The rapid integration of generative artificial intelligence (AI) has transformed how university students approach academic vocabulary development and writing, yet questions remain about how such tools can be deployed responsibly and sustainably within formal curricula. While existing scholarship has explored AI and mobile technologies in language learning, few studies have adopted a systematic, practitioner-driven inquiry into how generative AI shapes vocabulary retention, learner engagement, and critical literacy across different curricular structures. This presentation reports on a forthcoming action research project that has successfully secured University Grants Committee (UGC) funding and will be implemented in the coming semester commencing September 2026.

Framed as a cycle of action research, the project positions the teacher-researchers as reflective practitioners who iteratively design, implement, and refine AI-mediated pedagogy in two authentic classroom contexts: an elective, vocabulary-focused course and a core, skills-oriented University English course. Within a blended learning framework, AI is deployed as a tentative, non-authoritative aid for vocabulary learning outside the classroom, followed by in-class activities centred on critical evaluation, discussion, and consolidation. Departing from the earlier comparative emphasis, this study foregrounds the action research methodology itself as a vehicle for generating context-sensitive, replicable pedagogical practice.

The research adopts a mixed-methods design comprising three data strands: (a) pre- and post-tests measuring vocabulary retention and reuse; (b) an end-of-course survey capturing learner attitudes, engagement, and perceived efficacy; and (c) textual analysis of student output produced throughout the course. Triangulating quantitative and qualitative evidence, the study aims to measure the impact of AI-supported activities on lexical development and to develop a validated pedagogical model for responsible AI integration in university English instruction.

By sharing the design rationale, funded research plan, and anticipated implementation of this action

research, the presentation invites dialogue on how practitioner inquiry can produce empirically grounded, sustainable recommendations for AI adoption that support vocabulary retention and critical literacy while safeguarding academic integrity.

Keywords: Action Research; AI-Mediated Learning Instruction; Mixed-Methods Design; TESOL; Vocabulary Retention