

Enhancing Self-Regulated Learning and Learning Motivation Through Generative Learning: An Empirical Study

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This study explores the impact of generative artificial intelligence (AI) on self-regulated learning and motivation among graduate students in psychological counseling at a national university in Taiwan. Over a 16-week action research course, students used AI tools such as ChatGPT to enhance their learning. Data collected through pre- and post-course questionnaires and qualitative interviews showed that generative learning significantly improved students' ability to set goals, monitor progress, and use AI for personalized learning. Students' attitudes shifted from passive use to active exploration, with reflections on AI's potential in career development. Statistical analysis revealed significant improvements in learning motivation and self-regulated learning ($p < .05$). However, excessive reliance on AI could hinder critical thinking and creativity, leading to self-doubt. Educators should provide structured guidance to balance AI use with self-regulated learning and encourage critical reflection. Course design should gradually build students' AI literacy, progressing from basic to advanced levels. Future research should explore generative learning across disciplines and consider ethical issues and students' psychological adaptation to AI technologies

Index Terms—Action Research, Generative Learning, Learning Motivation, Self-Regulated Learning, Single-Group Pretest-Posttest