

## Exploring the Role of Attitudes and Motivation in Shaping Generative AI Self-Efficacy Among College Students

**Ya-Ping Shih**

Ph.D. Student, Department of Education, National Chengchi University, Taiwan, Wenshan District Taipei City, Taiwan

**Yu-chu Yeh\***

Distinguished Professor, Research fellow Institute of Teacher Education, National Chengchi University, Wenshan District Taipei City, Taiwan

Research Center for Mind, Brain & Learning, National Chengchi University, Taiwan

**Princy Pappachan**

Assistant Professor, Department of Foreign Languages, National Chiayi University

**Xingzi Yu**

Ph.D. Student, Department of Education, National Chengchi University, Taiwan, Wenshan District Taipei City, Taiwan

### **Abstract:**

With the growing integration of generative artificial intelligence (generative AI) tools in education, understanding the psychological factors that influence college students' self-efficacy in using generative AI has become increasingly important. This study investigates the relationship between college students' generative AI use motivation (AIM), attitudes toward generative AI use (AIA), and generative AI self-efficacy (AIE). Inventory investigation through SurveyCake was employed in this study and structural equation modeling was employed to examine the hypothesized relationships among the variables. The results indicated that students with more positive AIA and stronger AIM exhibited higher AIE. Specifically, students who approached generative AI with a mindful, deep-learning orientation and demonstrated strong intrinsic motivation were more likely to believe in their ability to use generative AI effectively for academic tasks. These findings suggest that promoting positive attitudes and motivation toward generative AI is key to enhancing students' self-efficacy. Therefore, it is essential for educators to intentionally design course experiences that cultivate these psychological traits.