

## **Influences of Generative AI Self-Efficacy, Critical Thinking Dispositions, and Creative Dispositions on Creative Problem-Solving**

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### **Abstract:**

With creative problem-solving (CPS) ability recognized as a key competency for academic and professional success in the 21st century, prior research has emphasized the complementary roles of creativity dispositions and critical thinking dispositions as well as the positive influence of self-efficacy on individuals' CPS ability. However, the integration of generative artificial intelligence (AI) into educational contexts has begun to reshape students' cognitive processes, prompting critical inquiry into the role of AI use efficacy in supporting or enhancing CPS outcomes. Accordingly, this study proposed to investigate the combined influence of creativity dispositions, critical thinking dispositions, and AI use efficacy on students' CPS ability. Drawing on data collected from college students, the results indicated that all three predictors significantly impacted CPS ability. Furthermore, a positive correlation was observed among creativity, critical thinking dispositions, and AI use efficacy, suggesting a mutually reinforcing relationship between cognitive dispositions and learners' confidence in AI-supported educational environments. The study underscores the importance of interdisciplinary approaches that integrate AI literacy with creativity and critical thinking instruction, promoting a holistic learning experience that effectively prepares students to meet the demands of the 21st-century workplace.