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## 學生出題策略與傳統練習策略對大學生學習成就、認知與後設認知策略使用之影響

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## 摘 要

本研究探討「學生出題」策略與「題目練習」對學生學業成就、認知策略與後設認知策略的影響。研究採取準實驗法,由同一位老師教導的兩班土木工程學系學生(共69位),以不同策略進行六禮拜的課程,之後比較兩班級的學業成就,並比較不同策略學習前、後對認知策略及後設認知策略的影響。研究結果顯示,相較於傳統「題目練習」策略,「學生出題」策略較能引發學生於聽課歷程中運用不同之認知與後設認知策略,但不同策略並未造成學業成就上的差異。根據本研究發現及相關理論根基,建議教師可於課堂中嘗試使用學生出題策略,以輔助學生認知與後設認知策略之發展。

關鍵詞:後設認知策略、認知策略、練習、學生出題

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## The Comparative Effects of Student Question-Posing and Question-Answering Strategies on **Promoting College Students' Academic** Achievement, Cognitive and Metacognitive **Strategies Use**

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## Abstract

The study examined the comparative effects of student multiple-choice questionposing and question-answering strategies on promoting students' academic achievement, cognitive and metacognitive strategies use in a lecture-mode instructional setting. In total, 69 civil engineering undergraduates enrolled in two sessions of a required course participated in the study. Statistical analysis found that student multiple-choice questionposing strategy is a more productive strategy for inducing and engaging students in mobilizing cognitive and metacognitive strategies as compared to the traditional questionanswering arrangement. In terms of students' academic performance, student multiplechoice question-posing is as effective a strategy as question-answering. Based on the present study, it is suggested that instructors who were accustomed to in-class practice

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sessions might consider a student question-posing approach for an amiable change to promote students' cognitive and metacognitive strategies use without worrying about its less favorable impact on students' performance.

Keywords: cognitive strategies, metacognitive strategies, question-answering, student question-posing

