

IMPROVE STUDENT LEARNING OUTCOME THROUGH PERSONAL RESPONSE SYSTEM (CLICKERS)

Researcher: Ran Cai

Thesis Advisor: Dr. Bih-Ru Lea (leabi@mst.edu) and Lili Eng
Thesis Committee: Dr. Wen-Bin Yu
Business and Information Technology Department
Missouri University of Science and Technology, Rolla, MO 65409

ABSTRACT

The main purpose of this research was to examine the impact on student learning outcome via using Personal Response Systems (PRS) or clicker, as they are commonly called. Course grades as dependent variable were compared between traditional lecture format and clicker usage lecture format. Statistical analysis indicated that there were differences in course scores between students who used clickers and students who did not. In general, clicker use results in better test scores.

This study also consider the influence of dependent factors, such as major, student year, gender, class level, class subject combine with the two lecture styles to gain insight into clicker usage.

Moreover, two surveys were conducted after first test and at the end of semester for all the studied classes who adopted clickers in the lecture. Through the statistical results of both surveys, students perceive that the use of clickers in the classroom improve their learning outcome and their perceptions toward the usage of clickers do not change over time.

Through the observations of independent factors, class level negatively influenced course grades with using clickers, while class subject in our case propose that students in Managerial Accounting had better course scores with clickers than students in Information Technology courses did. Students' demographic factors did not significantly impact students course grades.

In summary, the results in this study suggested that students have a positive experience with using clickers and the usage of clickers improves their overall grades. Therefore, the use of clickers has the potential to improve learning outcomes.