

## **Impact of problem-based learning strategy on students' mathematical value among secondary school students**

### **ABSTRACT**

This study examined the effectiveness of implementing a problem-based learning (PBL) strategy on the mathematical values of the mathematics secondary school. A quasi-experimental nonrandomized control group post-test design was conducted, which consisted of 62 students in two intact groups. 35 students were placed in the experimental group, while 27 students in the control group participated in this study. Students in the experimental group received the PBL instruction strategy, while the control group learned mathematics using conventional instructional in a classroom for eight weeks. Students' mathematical values were measured using a set of rubrics consisting of nine mathematics educational values. The results of this study showed the students from the PBL strategy group demonstrated significantly higher scores than the conventional instruction strategy group in the overall mathematical values and the subscales of accuracy, conjecturing, consistency, creativity, effective organization, efficient working/ strategies, flexibility, persistence, and systematic working. Therefore, it is recommended that the use of the PBL strategy would help students to understand mathematical values better compared to conventional instruction.

**Keyword:** Conventional instructional strategy; Mathematical values; Problem-based learning strategy; Quasi-experimental; Secondary school students