

ABSTRACT

Sadira Verda Maritza (2025). ***Enhancing Mathematical Problem-Solving Ability and Self-Regulated Learning of Vocational High School Students Through a Kahoot-Assisted Problem-Based Learning Model.***

Mathematical problem-solving skills and self-regulated learning abilities are crucial factors in the success of mathematics education, particularly at the vocational high school (SMK) level. However, these skills among SMK students remain relatively low. The implementation of a problem-based learning model assisted by Kahoot offers an alternative solution to enhance both aspects. This study aims to: (1) examine the improvement of students' mathematical problem-solving abilities under conventional learning; (2) assess students' self-regulated learning in both learning models; and (3) investigate the positive correlation between mathematical problem-solving ability and self-regulated learning among students taught using the problem-based learning model assisted by Kahoot. A quasi-experimental method was employed in this study. The research subjects were students from SMK Nasional Bandung. The instruments used included a test to measure mathematical problem-solving ability and a non-test instrument in the form of a self-regulated learning questionnaire. Based on the data analysis, the following conclusions were drawn: (1) the improvement in mathematical problem-solving ability was greater in students taught using the problem-based learning model assisted by Kahoot compared to those receiving conventional instruction; (2) students taught with the Kahoot-assisted problem-based learning model demonstrated better self-regulated learning than those under conventional learning; and (3) there was a significant positive correlation between mathematical problem-solving ability and self-regulated learning among students taught with the Kahoot-assisted problem-based learning model.

Keywords: *Mathematical Problem-Solving Ability, Self-Regulated Learning, Problem-Based Learning Model, Kahoot.*