

## ABSTRACT

AUDIA NURUL FITRIA. ***Improving Mathematical Problem-Solving Ability and Self-Confidence of Junior High School Students Through Geogebra-Assisted Problem-Based Learning Model***

*Mathematical problem-solving ability and self-confidence are abilities that must be mastered by students in mathematics learning. Efforts made to improve mathematical problem-solving ability are by implementing a student-centered learning model. One way to improve mathematical problem-solving ability is by implementing the GeoGebra-assisted Problem-Based Learning model. This study aims to determine: 1) the increase in mathematical problem-solving ability of students who received the GeoGebra-assisted problem-based learning model is higher than students who received the regular learning model; 2) the self-confidence of students who received the GeoGebra-assisted problem-based learning model is better than students who received the regular learning model; 3) the correlation between mathematical problem-solving ability and self-confidence of students who received the GeoGebra-assisted problem-based learning model. The method used in this study is a quasi-experimental method with a non-equivalent control group design. The subjects in this study were eighth-grade students of SMP Negeri 3 Parongpong in the 2024-2025 academic year with a sample of two classes, namely class VIII-E as the experimental class treated with the GeoGebra-assisted problem-based learning model and class VIII-C as the control class treated with the regular learning model. The research instruments used were a mathematical problem-solving ability test and a self-confidence questionnaire that had met the criteria for item reliability. The research data were processed and analyzed using the IBM SPSS Statistics 23 for Windows program. The results of the study showed: 1) the increase in mathematical problem-solving abilities of students who received the GeoGebra-assisted problem-based learning model was higher than students who received the regular learning model; 2) the self-confidence of students who received the GeoGebra-assisted problem-based learning model was better than students who received the regular learning model; 3) there was a positive correlation between mathematical problem-solving abilities and self-confidence of students who received the GeoGebra-assisted Problem-Based Learning model.*

**Keywords:** *Mathematical Problem Solving Ability, Self-confidence, GeoGebra-assisted Problem-Based Learning Model*