

ABSTRACT

Venesia Wiranda (2024). *Mathematical Problem-Solving Abilities and Junior High School Students' Self-confidence through the Treffinger Learning Model Assisted by Geogebra.*

Problem-solving through mathematics is at the core of learning because it is a fundamental skill in teaching and learning activities at schools. The ability to solve problems must be possessed by secondary school students in mathematics. Additionally, the importance of self-confidence in students affects their success in learning mathematics. However, in reality, both of these aspects among junior high school students are still low, necessitating innovation in learning models to improve their quality. The objectives of this research are: 1) to determine if there is a higher improvement in mathematical problem-solving abilities among students who receive the Treffinger learning model assisted by Geogebra compared to those using the regular learning model; 2) to assess if the self-confidence of students who receive the Treffinger learning model assisted by Geogebra is better than those who receive the regular learning model; 3) to investigate the correlation between mathematical problem-solving abilities and self-confidence of junior high school students using the Treffinger learning model assisted by GeoGebra. This research was conducted at SMP Negeri 30 Bandung, with the research sample consisting of two classes: VIII A as the experimental class using the Treffinger learning model assisted by GeoGebra, and VIII D as the control class using the regular learning model. The instruments used in this research were essay questions and questionnaires that had been piloted to ensure their validity as research instruments. The results of the analysis are as follows: 1) There is a higher improvement in mathematical problem-solving abilities among students who received the Treffinger learning model compared to those who received the regular learning model. 2) The self-confidence of students who received the Treffinger learning model is better than those who received the regular learning model. 3) There is a positive correlation between mathematical problem-solving abilities and self-confidence among students who received the Treffinger learning model.

Keywords: *Mathematical Problem-Solving, Self-confidence, Treffinger Learning Model, Geogebra.*