

ABSTRAK

**PENGARUH PENGGUNAAN GEOGEBRA DALAM MODEL *GUIDED DISCOVERY LEARNING* TERHADAP KEMAMPUAN REPRESENTASI MATEMATIS SISWA
(Studi pada Siswa Kelas IX SMP Negeri 6 Metro Semester Genap Tahun Pelajaran 2025/2026)**

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Penelitian ini bertujuan untuk mengetahui pengaruh penggunaan GeoGebra dalam model *guided discovery learning* terhadap kemampuan representasi matematis siswa. Populasi dalam penelitian ini adalah seluruh siswa kelas IX SMP Negeri 6 Metro semester genap tahun pelajaran 2025/2026 sebanyak 218 siswa yang terdistribusi ke dalam 7 kelas. Sampel penelitian dipilih melalui teknik *purposive sampling*, sehingga diperoleh kelas 9.3 sebagai kelas eksperimen dan 9.2 sebagai kelas kontrol. Jenis penelitian ini adalah *quasi-experimental* dengan desain penelitian *pretest-posttest control group design*. Data penelitian berupa data kuantitatif yang diperoleh melalui tes kemampuan representasi matematis siswa. Pengujian hipotesis menggunakan uji non parametrik yaitu uji *Mann-Whitney U*. Hasil analisis menunjukkan bahwa peningkatan kemampuan representasi matematis siswa yang menggunakan GeoGebra dalam model *guided discovery learning* lebih tinggi daripada peningkatan kemampuan representasi matematis siswa yang tanpa menggunakan GeoGebra dalam model *guided discovery learning*. Dengan demikian, penggunaan GeoGebra dalam model *guided discovery learning* berpengaruh terhadap kemampuan representasi matematis siswa.

Kata kunci: GeoGebra, *guided discovery learning*, kemampuan representasi matematis

ABSTRACT

***THE EFFECT OF USING GEOGEBRA IN THE GUIDED DISCOVERY
LEARNING MODEL ON STUDENTS' MATHEMATICAL
REPRESENTATION SKILLS
(A Study of IX Grade Students at SMP Negeri 6 Metro in the Even
Semester of the 2025/2026 Academic Year)***

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This study aimed to determine the effect of using GeoGebra in the guided discovery learning model on students' mathematical representation skills. The population in this study consisted of all 218 ninth-grade students at SMP Negeri 6 Metro in the even semester of the 2025/2026 academic year, distributed across seven classes. The sample was selected using purposive sampling, with Class 9.3 serving as the experimental class and Class 9.2 as the control class. This study employed a quasi-experimental method with a pretest-posttest control group design. The data were quantitative, obtained through tests measuring students' mathematical representation abilities. Hypothesis testing was conducted using a non-parametric test, namely the Mann-Whitney U test. The results of the analysis showed that the improvement in students' mathematical representation abilities using GeoGebra in the guided discovery learning model was higher than that of students who learned without using GeoGebra in the same model. Thus, the use of GeoGebra in the guided discovery learning model had an effect on students' mathematical representation abilities.

Keywords: *GeoGebra, guided discovery learning, mathematical representation skills*