

ABSTRAK

PENGARUH MODEL *PROBLEM BASED LEARNING* TERHADAP KEMAMPUAN KOMUNIKASI MATEMATIS SISWA (Studi pada Siswa Kelas IX SMP Tri Sukses Natar Semester Genap Tahun Pelajaran 2024/2025)

Oleh

AULIA SYAHALDA

Penelitian eksperimen semu ini bertujuan untuk mengetahui pengaruh model *problem based learning* terhadap kemampuan komunikasi matematis siswa. Populasi penelitian ini adalah seluruh siswa kelas IX SMP Tri Sukses Natar tahun pelajaran 2024/2025 yang terdistribusi ke dalam 4 kelas. Sampel penelitian ini adalah siswa kelas IX A sebagai kelas eksperimen dan kelas IX B sebagai kelas kontrol, yang dipilih dengan teknik *cluster random sampling*. Desain yang digunakan adalah *pretest-posttest control group design*. Pengumpulan data menggunakan teknik tes. Hasil uji coba menunjukkan bahwa instrumen tes dinyatakan valid, reliabel, daya pembeda cukup, baik dan sangat baik; dan tingkat kesukaran sedang. Analisis data menggunakan uji *Mann-Whitney U*. Berdasarkan hasil uji diperoleh bahwa peningkatan kemampuan komunikasi matematis siswa yang mengikuti *problem based learning* lebih tinggi dibandingkan peningkatan kemampuan komunikasi matematis siswa yang mengikuti pembelajaran konvensional. Dengan demikian, model *problem based learning* berpengaruh terhadap kemampuan komunikasi matematis siswa.

Kata Kunci: kemampuan komunikasi, pengaruh, *problem based learning*

ABSTRACT

THE EFFECT OF THE PROBLEM-BASED LEARNING MODEL ON STUDENTS' MATHEMATICAL COMMUNICATION SKILLS (A Study on Ninth-Grade Students of SMP Tri Sukses Natar in the Second Semester of the 2024/2025 Academic Year)

By

AULIA SYAHALDA

This quasi-experimental study aimed to investigate the effect of the problem-based learning model on students' mathematical communication skills. The population of this study was consisted of all ninth-grade students at SMP Tri Sukses Natar in the 2024/2025 academic year, distributed across four classes. The sample was selected using cluster random sampling, with class IX A assigned as the experimental group and class IX B as the control group. The research design used was a pretest-posttest control group design. Data were collected using a test instrument. The results of the instrument trial showed that the test was valid, reliable, had sufficient to very good discriminating power, and a moderate level of difficulty. Data were analyzed using the Mann-Whitney U test. The results showed that the increase in mathematical communication skills of students who were taught using the PBL model was higher than that of students who received conventional instruction. Therefore, it can be concluded that the problem-based learning model has a significant effect on students' mathematical communication skills.

Keywords: *communication skills, effect, problem-based learning*