

ABSTRAK

PENGARUH MODEL *PROJECT BASED LEARNING* TERHADAP KEMAMPUAN KOMUNIKASI MATEMATIS SISWA (Studi pada Siswa Kelas VIII SMP Negeri 1 Madang Suku III Semester Ganjil Tahun Pelajaran 2025/2026)

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Penelitian eksperimen semu ini bertujuan untuk mengetahui pengaruh penerapan model *project based learning* terhadap kemampuan komunikasi matematis siswa. Penelitian ini menggunakan desain *pretest posttest control group*. Populasi penelitian adalah seluruh siswa kelas VIII SMP Negeri 1 Madang Suku III tahun pelajaran 2025/2026 yang berjumlah 142 siswa dan terdistribusi ke dalam lima kelas. Sampel penelitian dipilih melalui teknik *cluster random sampling*, dengan kelas VIII C sebagai kelas eksperimen dan kelas VIII D sebagai kelas kontrol. Data diperoleh melalui tes kemampuan komunikasi matematis siswa. Analisis data dilakukan menggunakan uji *Mann-Whitney U* pada taraf signifikansi $\alpha = 0,05$. Hasil analisis menunjukkan bahwa peningkatan kemampuan komunikasi matematis siswa yang mengikuti pembelajaran dengan model *project based learning* lebih tinggi daripada peningkatan kemampuan komunikasi matematis siswa yang mengikuti pembelajaran konvensional. Dengan demikian, model *project based learning* berpengaruh terhadap kemampuan komunikasi matematis siswa.

Kata kunci: komunikasi matematis, *project based learning*

ABSTRACT

THE EFFECT OF THE PROJECT BASED LEARNING MODEL ON STUDENTS' MATHEMATICAL COMMUNICATION ABILITY (A Study on 8th Grade Students of SMP Negeri 1 Madang Suku III in the Odd Semester of the 2025/2026 Academic Year)

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This quasi experimental study aimed to examine the effect of the project based learning model on students' mathematical communication ability. This study employed a pretest posttest control group design. The research population consisted of all eighth grade students of SMP Negeri 1 Madang Suku III in the 2025/2026 academic year, totaling 142 students distributed across five classes. The research sample was selected using a cluster random sampling technique, with class VIII C assigned as the experimental group and class VIII D as the control group. Data were collected through a students' mathematical communication ability test. Data analysis was conducted using the Mann Whitney U test at a significance level of $\alpha = 0.05$. The results indicated that the improvement in mathematical communication ability of students who participated in project based learning model was higher than the improvement in mathematical communication ability of students who received conventional learning. Therefore, the project based learning model had a significant effect on students' mathematical communication ability.

Keywords: *mathematical communication, project based learning*