

## ABSTRAK

Sazali, Muhammad. 2022. *Peningkatan Komunikasi Matematis Siswa Dengan Model Project Based Learning Pada Materi Sistem Persamaan Linear Dua Variabel Kelas VIII SMP*. Skripsi. Tanjungpinang: Program Studi Pendidikan Matematika, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Maritim Raja Ali Haji, Pembimbing 1: Assist. Prof. Dr. Nur Izzati, S.Pd., M.Si. Pembimbing II: Assist. Prof. Metta Liana, S.Pd., M.Pd.

Kata kunci: **Komunikasi Matematis, Project Based Learning**

Penelitian ini bertujuan untuk mengetahui perbedaan peningkatan komunikasi matematis siswa yang belajar menggunakan model *project based learning* dan siswa yang belajar menggunakan model pembelajaran langsung pada kelas VIII SMP Negeri 16 Tanjungpinang. Jenis penelitian yang digunakan adalah *Quasy Experiment* dengan desain *pretest-posttest control group*. Populasi pada penelitian ini adalah siswa/i kelas VIII SMP Negeri 16 Tanjungpinang tahun ajaran 2022-2023 yaitu kelas VIIIA sampai VIIIF. Sampel diambil melalui teknik *cluster random sampling* dengan cara mengundi enam kelas sehingga didapatkan dua kelas sampel, yaitu kelas VIIIC sebagai kelas eksperimen dan kelas VIID sebagai kelas kontrol. Pengumpulan data dilakukan dengan menggunakan instrumen tes soal uraian untuk mengukur komunikasi matematis siswa pada materi sistem persamaan linear dua variabel. Hasil penelitian diperoleh rata-rata peningkatan komunikasi matematis siswa kelas eksperimen sebesar 0,39, sedangkan rata-rata peningkatan komunikasi kelas kontrol sebesar 0,28. Pada uji *independent t-test*, nilai *Sig. (2 tailed)* sebesar 0,018. Karena uji yang dilakukan adalah uji satu pihak (uji pihak kanan), maka  $P\text{-value} = \frac{1}{2} \times 0,018 = 0,009$  dan diketahui  $0,009 \leq 0,05$ , sehingga  $H_a$  diterima. Berdasarkan hal tersebut, dapat disimpulkan bahwa peningkatan komunikasi matematis siswa kelas eksperimen yang belajar menggunakan model *project based learning* lebih tinggi dibandingkan peningkatan komunikasi matematis siswa kelas kontrol yang belajar menggunakan model pembelajaran langsung.

## **ABSTRACT**

Sazali, Muhammad. 2022. *Enhancement of Students's Mathematical Communication with Project Based Learning Models on Material of Linear Equation System of Two Variables for Class VIII SMP*. Thesis. Tanjungpinang: Department of Mathematics Education, The Faculty of Teacher Training and Education, Maritime Raja Ali Haji University. Advisor: Assist. Prof. Dr. Nur Izzati, S.Pd., M.Si. Co-advisor: Assist. Prof. Metta Liana, S.Pd., M.Pd.

**Keywords:** *Mathematical Communication, Project Based Learning*

This study aims to determine differences in the increase in students' mathematical communication between those who study using the project-based learning model and those who study using the direct learning model in the 8th Grade of SMP Negeri 16 Tanjungpinang. The type of this research is *Quasy Experiment* with pretest-posttest control group design. The population of this study were the 8th grade students of SMP Negeri 16 Tanjungpinang for the 2022-2023 school year, namely classes VIIIA to VIIF. Samples were taken using the cluster random sampling technique by drawing lots of six classes to obtain two sample classes, namely class VIIC as the experimental class and class VIID as the control class. Data collection was carried out using an essay test instrument to measure students' mathematical communication in the matter of a system of two-variable linear equations. The results showed that the average increase in the mathematical communication of experimental class students was 0,39, while the average increase in control class communication was 0,28. In the independent t-test, the value of Sig. (2 tailed) was 0,018. Because the test is a one-tailed test (right tail test), then the P-value =  $\frac{1}{2} \times 0,018 = 0,009$  and it is known that  $0,009 \leq 0,05$ , so that  $H_a$  was accepted. Based on this, it can be concluded that the increase in mathematical communication of experimental class students who studied using the project-based learning model was higher than the increase in mathematical communication of control class students who studied using direct learning model.