

ABSTRAK

Hafinia Taohi, 2024. “Penerapan Model *Problem Based Learning* Dalam Peningkatan Kemampuan Berpikir Logis Matematis Siswa SMP Negeri 5 Kota Ternate Pada Materi Sistem Persamaan Linier Dua Variabel” (Suatu Penelitian Pada Siswa Kelas VIII-3 SMP Negeri 5 Kota Ternate Tahun Ajaran 2023/2024) Di Bawah Bimbingan **Dr. Karman La Nani, S.Pd.,M.Pd dan Dr. Joko Suratno, S.Pd.,M.Pd.Si**

Penelitian eksperimen ini bertujuan untuk mengetahui: 1) Kemampuan berpikir logis matematis siswa setelah diterapkan model *Problem Based Learning* pada materi sistem persamaan linier dua variabel. 2) Peningkatan kemampuan logis matematis siswa setelah diterapkan model *Problem Based Learning* pada materi sistem persamaan linier dua variabel. 3) Penerapan model *Problem Based Learning* dapat meningkatkan kemampuan logis matematis siswa pada materi sistem persamaan linier dua variabel.

Desain penelitian ini menggunakan *one grup pretest posttest*. Sampel pada penelitian ini yaitu siswa kelas VIII-3 SMP Negeri 5 Kota Ternate Tahun Ajaran 2023/2024. Teknik pengumpulan data menggunakan instrumen tes Sedangkan teknik analisis data menggunakan analisis deskriptif dan analisis inferensial.

Hasil penelitian ini menunjukkan bahwa 1) Kemampuan berpikir logis matematis siswa yaitu, a) Siswa dengan kemampuan berpikir logis matematis kategori tinggi ada 14 siswa. b) Siswa dengan kemampuan berpikir logis matematis kategori sedang ada 13 siswa. c) Siswa dengan kemampuan berpikir logis matematis kategori rendah ada 1 siswa. 2) Terdapat peningkatan kemampuan berpikir logis matematis siswa setelah diterapkan model *Problem Based Learning* pada materi sistem persamaan linier dua variabel, dan 3) Peningkatan kemampuan berpikir logis matematis siswa setelah diterapkan model *Problem Based Learning* pada materi sistem persamaan linier dua variabel dalam kategori sedang.

Kata kunci: *Problem Based Learning, berpikir logis matematis siswa, sistem persamaan linier dua variabel.*

ABSTRACT

Hafinia Taohi, 2024. "Application of the Problem Based Learning Model to Improve the Mathematical Logical Thinking Ability of Students at SMP Negeri 5, Ternate City on the Material of Systems of Linear Equations in Two Variables" (A Research on Class VIII-3 Students at SMP Negeri 5, Ternate City, Academic Year 2023/2024) Under the Guidance of **Dr. Karman La Nani, S.Pd., M.Pd** and **Dr. Joko Suratno, S.Pd., M.Pd.Si**

This experimental research aims to determine: 1) Students' mathematical logical thinking abilities after applying the Problem Based Learning model to the material on two-variable linear equation systems. 2) Increasing students' mathematical logical abilities after applying the Problem Based Learning model to the material on two-variable linear equation systems. 3) The application of the Problem Based Learning model can improve students' mathematical logical abilities in the material of two-variable linear equation systems.

This research design uses one group pretest posttest. The sample in this study was students in class VIII-3 of SMP Negeri 5 Ternate City for the 2023/2024 academic year. The data collection technique uses test instruments. Meanwhile, the data analysis technique uses descriptive analysis and inferential analysis.

The results of this research show that 1) Students' mathematical logical thinking abilities are, a) There are 14 students with high category mathematical logical thinking abilities. b) There are 13 students with moderate mathematical logical thinking abilities. c) There is 1 student with low category mathematical logical thinking abilities. 2) There is an increase in students' mathematical logical thinking abilities after applying the Problem Based Learning model to the material on systems of linear equations with two variables, and 3) There is an increase in students' mathematical logical thinking abilities after applying the Problem Based Learning model to material on systems of linear equations with two variables in the medium category.

Keywords: *Problem Based Learning, students' mathematical logical thinking, system of linear equations in two variables.*