

ABSTRAK

Fanny Fadlilatun Nisa, 1192050039 (2026) “Penerapan Model Pembelajaran *Predict-Discuss-Explain-Observe-Discuss-Explain* (PDEODE) Untuk Meningkatkan Kemampuan Penalaran Matematis Siswa Dan Disposisi Matematis”

Kemampuan penalaran matematis dan disposisi matematis siswa merupakan aspek penting yang perlu ditingkatkan melalui model pembelajaran yang interaktif. Penelitian ini bertujuan untuk menganalisis peningkatan kemampuan penalaran matematis dan disposisi matematis siswa melalui penerapan model pembelajaran *Predict-Discuss-Explain-Observe-Discuss-Explain* (PDEODE) dibandingkan dengan pembelajaran ekspositori. Metode penelitian yang digunakan adalah kuasi eksperimen (*quasi-experiment*). Populasi penelitian ini mencakup seluruh siswa kelas sebelas di MAN 1 Kabupaten Bandung, dengan sampel terbagi menjadi dua kelas yaitu kelas eksperimen yang memperoleh pembelajaran PDEODE dan kelas kontrol yang memperoleh pembelajaran ekspositori. Instrumen penelitian berupa tes kemampuan penalaran matematis (*pretest* dan *posttest*) serta angket sikap disposisi matematis. Berdasarkan uji coba instrumen, seluruh butir soal tes dan pernyataan angket dinyatakan valid serta memiliki tingkat reliabilitas yang tinggi. Data hasil penelitian dianalisis menggunakan uji *t-independent*. Hasil penelitian menunjukkan bahwa peningkatan kemampuan penalaran matematis siswa pada kelas eksperimen berada pada kategori tinggi dan secara signifikan lebih baik daripada kelas kontrol. Indikator menarik kesimpulan dan melakukan manipulasi matematika mengalami peningkatan tinggi, sedangkan indikator mengajukan dugaan dan menyusun bukti berada pada kategori sedang. Selain itu, disposisi matematis siswa yang memperoleh pembelajaran PDEODE secara keseluruhan menunjukkan kriteria sangat tinggi. Dengan demikian, disimpulkan bahwa model PDEODE efektif dalam meningkatkan kemampuan penalaran matematis siswa, dan dapat menjadi alternatif yang layak untuk pembelajaran matematika.

Kata kunci: *Predict-Discuss-Explain-Observe-Discuss-Explain* (PDEODE), penalaran matematis, pembelajaran ekspositori, disposisi matematis.

Abstract

Students' mathematical reasoning ability and mathematical disposition are important aspects that need to be developed through interactive learning models. This study aimed to analyze the improvement of students' mathematical reasoning ability and mathematical disposition through the implementation of the Predict-Discuss-Explain-Observe-Discuss-Explain (PDEODE) learning model compared with expository learning. This study employed a quasi-experimental method involving an experimental class and a control class. The population consisted of all eleventh-grade students at MAN 1 Kabupaten Bandung, with the sample divided into an experimental class that received instruction using the PDEODE learning model and a control class that received expository learning. The research instruments consisted of a mathematical reasoning ability test administered as a pretest and posttest and a mathematical disposition questionnaire. Based on the results of the instrument tryout, all test items and questionnaire statements were declared valid and demonstrated a high level of reliability. The data were analyzed using an independent-samples t-test. The results showed that the improvement in students' mathematical reasoning ability in the experimental class was categorized as high and was significantly better than that in the control class. The indicators of drawing conclusions and performing mathematical manipulation showed high improvement, while the indicators of making conjectures and constructing proofs showed moderate improvement. Furthermore, students' mathematical disposition after receiving instruction using the PDEODE learning model was categorized as very high overall. Based on these findings, it can be concluded that the PDEODE learning model is effective in improving students' mathematical reasoning ability and can serve as an alternative learning model for mathematics instruction.

Keywords: *Predict-Discuss-Explain-Observe-Discuss-Explain (PDEODE), mathematical reasoning, expository learning, mathematical disposition.*