

**PENGARUH PENERAPAN PENDEKATAN PEMBELAJARAN
MENDALAM MELALUI MODEL *PROBLEM BASED LEARNING*
TERHADAP KEMAMPUAN PEMECAHAN MASALAH MATEMATIS
SISWA KELAS VII**

Oleh

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ABSTRAK

Tujuan utama studi ini adalah untuk menganalisis seberapa besar signifikansi pengaruh integrasi pendekatan Pembelajaran Mendalam ke dalam model *Problem Based Learning (PBL)* terhadap kapasitas pemecahan masalah matematis peserta didik. Secara metodologis, penelitian ini termasuk dalam jenis eksperimen semu (*quasi experiment*) dengan menerapkan rancangan *post-test only control group design*. Seluruh siswa kelas VII di SMP Negeri 4 Singaraja tahun pelajaran 2025/2026 ditetapkan sebagai populasi dalam riset ini. Selanjutnya, peneliti menggunakan teknik acak kelompok (*cluster random sampling*) untuk mengambil sampel, hingga didapatkan dua kelas amatan, yaitu kelas VII.11 untuk kelompok eksperimen dan kelas VII.10 untuk kelompok kontrol, di mana masing-masing memuat 38 peserta didik. Selama prosesnya, kelompok eksperimen difasilitasi dengan model *PBL* berpendekatan Pembelajaran Mendalam, sementara kelompok kontrol diajar secara konvensional. Penilaian kemampuan pemecahan masalah diukur lewat instrumen tes esai yang memuat tiga tahapan pokok, yakni memahami, merencanakan, dan melaksanakan penyelesaian masalah. Pengujian hipotesis dieksekusi memakai *independent sample t-test* satu arah dengan margin kesalahan 5%. Hasil komputasi memperlihatkan nilai t_{hitung} sebesar 4,191 dan probabilitas 0,001, yang bermakna diterimanya H_1 dan ditolaknya H_0 . Pengaruh perlakuan ini juga dikonfirmasi berada pada rentang yang sangat kuat, dibuktikan oleh skor Cohen's d 0,96. Secara keseluruhan, peserta didik yang menerima intervensi Pembelajaran Mendalam berbasis *PBL* mencatatkan kecakapan matematis yang jauh lebih superior dibandingkan kelas kontrol. Dengan demikian, pengaplikasian metode ini terbukti efektif sebagai alternatif pembelajaran yang interaktif untuk mendongkrak ketajaman pemecahan masalah siswa pada materi Aritmetika Sosial.

Kata kunci: Pembelajaran Mendalam, *PBL*, Kemampuan Pemecahan Masalah Matematis

THE EFFECT OF IMPLEMENTING A DEEP LEARNING APPROACH THROUGH THE PROBLEM-BASED LEARNING MODEL ON THE MATHEMATICAL PROBLEM-SOLVING SKILLS OF SEVENTH-GRADE STUDENTS

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ABSTRACT

This study aimed to investigate how incorporating a Deep Learning approach into a Problem-Based Learning (PBL) model affects students' mathematical problem-solving skills. To achieve this, the researcher employed a quasi-experimental method with a post-test-only control group design. The entire seventh-grade population at SMP Negeri 4 Singaraja during the 2025/2026 academic year served as the population. By using a cluster random sampling technique, two classes consisting of 38 students each were selected: Class VII.11 was assigned as the experimental group, while Class VII.10 served as the control group. Students in the experimental setting were taught utilizing the Deep Learning-enhanced *PBL* model, whereas those in the control setting were subjected to traditional teaching methods. An essay-based assessment was administered to gather data regarding mathematical problem-solving capabilities, evaluating three core dimensions: comprehending the issue, formulating a strategic plan, and carrying out the devised plan. Statistical analysis was performed employing an independent sample t-test with a 5% margin of error. The computational outcomes yielded a t-statistic of 4.191 alongside a probability value of 0.001, which justified the rejection of the null hypothesis (H_0) and the acceptance of the alternative hypothesis (H_1). Additionally, the magnitude of the intervention's impact was determined to be substantial, as evidenced by a Cohen's d score of 0.96. Ultimately, the results demonstrated that the mathematical problem-solving competencies of learners exposed to the Deep Learning-driven *PBL* model significantly outperformed those instructed conventionally. Therefore, the incorporation of this pedagogical strategy proves to be a highly effective mathematical teaching alternative for enhancing students' analytical skills, particularly in the domain of Social Arithmetic.

Keywords: *Deep Learning, PBL, Mathematical Problem-Solving Ability*