

**PENGARUH MODEL PEMBELAJARAN *PROBLEM BASED LEARNING*
DENGAN PENDEKATAN BERDIFERENSIASI TERHADAP KEMAMPUAN
PEMECAHAN MASALAH MATEMATIKA SISWA SMP KELAS VII PADA MATERI
PERBANDINGAN**

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ABSTRAK

Penelitian ini dilatarbelakangi oleh rendahnya kemampuan pemecahan masalah matematika siswa yang diduga dipengaruhi oleh proses pembelajaran yang masih cenderung menggunakan metode cerama sehingga keterlibatan aktif siswa dalam pembelajaran serta keberagaman karakteristik belajar siswa belum terakomodasi secara optimal. Penelitian ini bertujuan untuk mengetahui pengaruh model pembelajaran *Problem Based Learning* (PBL) dengan pendekatan berdiferensiasi terhadap kemampuan pemecahan masalah matematika siswa SMP kelas VII pada materi perbandingan. Penelitian ini merupakan penelitian eksperimen semu (*quasi experiment*) dengan desain *Post Test Only Control Group Design*. Populasi penelitian adalah seluruh siswa kelas VII SMP Negeri 1 Sukasada tahun ajaran 2025/2026 yang berjumlah 218 siswa. Sampel penelitian ditentukan menggunakan teknik cluster random sampling, sehingga terpilih kelas VII-C sebagai kelas eksperimen dan kelas VII-F sebagai kelas kontrol, masing-masing berjumlah 34 siswa. Pengumpulan data dilakukan menggunakan tes uraian kemampuan pemecahan masalah matematika pada materi perbandingan. Data dianalisis menggunakan uji-t (Independent Sample Test) setelah memenuhi uji prasyarat normalitas dan homogenitas. Hasil penelitian menunjukkan bahwa terdapat pengaruh yang signifikan model pembelajaran *Problem Based Learning* dengan pendekatan berdiferensiasi terhadap kemampuan pemecahan masalah matematika siswa. Hal ini ditunjukkan oleh nilai Sig. (2-tailed) sebesar $0,000 < 0,05$ dan nilai thitung sebesar 6,978. Rata-rata nilai *post-test* kelas eksperimen sebesar 77,03, sedangkan rata-rata nilai *post-test* kelas kontrol sebesar 45,68. Dengan demikian, dapat disimpulkan bahwa model pembelajaran *Problem Based Learning* dengan pendekatan berdiferensiasi lebih efektif dibandingkan pembelajaran konvensional dalam meningkatkan kemampuan pemecahan masalah matematika siswa pada materi perbandingan.

Kata kunci: *Problem Based Learning* (PBL), pendekatan berdiferensiasi, kemampuan pemecahan masalah matematika, perbandingan.

***THE EFFECT OF THE PROBLEM-BASED LEARNING MODEL WITH A
DIFFERENTIATION APPROACH ON SEVENTH GRADE JUNIOR HIGH SCHOOL
STUDENTS' MATHEMATICAL PROBLEM-SOLVING ABILITIES ON COMPARISON***

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ABSTRACT

This research is motivated by students' low mathematical problem-solving abilities, which are suspected to stem from an instructional process that still tends to rely on the lecture method; consequently, active student engagement and the diversity of student learning characteristics have not been optimally accommodated. This study aimed to determine the effect of the Problem-Based Learning (PBL) model with a differentiation approach on Seventh Grade Junior High School students' mathematical problem-solving abilities on comparison. This was a quasi-experimental study with a Post-Test Only Control Group Design. The study population was all 218 Seventh Grade Junior High School students in the 2025/2026 academic year. The sample was determined using a cluster random sampling technique, selecting class VII-C as the experimental class and class VII-F as the control class, each with 34 students. Data collection was conducted using a descriptive test of mathematical problem-solving abilities on the comparison material. Data were analyzed using a t-test (Independent Sample Test) after fulfilling the prerequisite tests of normality and homogeneity. The results of the study indicate that there is a significant influence of the Problem Based Learning learning model with a differentiation approach on students' mathematical problem-solving abilities. This is indicated by a Sig. (2-tailed) value of $0.000 < 0.05$ and a t-count value of 6.978. The average post-test score of the experimental class was 77.03, while the average post-test score of the control class was 45.68. Thus, it can be concluded that the Problem Based Learning learning model with a differentiation approach is more effective than conventional learning in improving students' mathematical problem-solving abilities on the comparison material.

Keywords: *Problem Based Learning (PBL), differentiation approach, mathematical problem-solving ability, comparison.*