

**META ANALISIS: PENGARUH MODEL *PROBLEM BASED LEARNING*
TERHADAP KEMAMPUAN BERPIKIR KRITIS DAN *SELF-EFFICACY*
DALAM PEMBELAJARAN MATEMATIKA
(ERNI NURSYA'BANI HOLIS, 2026)**

ABSTRAK

Penelitian ini bertujuan untuk mengetahui pengaruh model *Problem Based Learning* (PBL) terhadap kemampuan berpikir kritis dan *self-efficacy* dalam pembelajaran matematika berdasarkan keseluruhan studi maupun berdasarkan jenjang pendidikan. Penelitian ini menggunakan metode meta analisis terhadap artikel penelitian yang diperoleh melalui tahapan identifikasi, penyaringan (*screening*), dan seleksi berdasarkan kriteria inklusi. Dari 1.000 artikel yang diperoleh pada tahap penelusuran awal, terpilih 28 artikel yang menghasilkan 30 ukuran efek (*effect size*) dari jurnal nasional terindeks SINTA yang diterbitkan pada periode 2020–2024. Analisis data dilakukan menggunakan perangkat lunak *JASP* versi 0.18.1.0 melalui tahapan perhitungan *effect size*, uji heterogenitas, estimasi *summary effect size*, analisis moderator, *forest plot*, *funnel plot*, dan uji bias publikasi. Hasil penelitian menunjukkan bahwa model *Problem Based Learning* memberikan pengaruh positif terhadap kemampuan berpikir kritis dan *self-efficacy* dalam pembelajaran matematika. Secara keseluruhan, nilai *summary effect size* kemampuan berpikir kritis sebesar 0,738 yang termasuk kategori efek sedang, sedangkan nilai *summary effect size self-efficacy* sebesar 1,101 yang termasuk kategori efek besar. Berdasarkan analisis moderator menurut jenjang pendidikan, diperoleh nilai *effect size* sebesar 0,824 pada jenjang SD/ sederajat, 0,916 pada jenjang SMP/ sederajat, dan 0,837 pada jenjang SMA/ sederajat, yang seluruhnya berada pada kategori efek besar. Hasil analisis moderator menunjukkan nilai $Q_m = 0,517$, $df = 2$, dan $p = 0,772$ ($p > 0,05$), sehingga tidak terdapat perbedaan pengaruh model *Problem Based Learning* yang signifikan berdasarkan jenjang pendidikan. Dengan demikian, model *Problem Based Learning* terbukti memberikan pengaruh terhadap kemampuan berpikir kritis dan *self-efficacy* peserta didik dalam pembelajaran matematika pada berbagai jenjang pendidikan.

Kata kunci: Kemampuan berpikir kritis, meta analisis, pembelajaran matematika, *Problem Based Learning*, *self-efficacy*.

**META ANALYSIS: OF THE EFFECT OF PROBLEM BASED LEARNING
ON CRITICAL THINKING SKILLS AND SELF-EFFICACY IN
MATHEMATICS EDUCATION
(ERNI NURSYA'BANI HOLIS, 2026)**

ABSTRACT

This study aimed to examine the effect of the Problem Based Learning (PBL) model on critical thinking skills and self-efficacy in mathematics learning both across all included studies and at different educational levels. This study employed a meta-analysis method of research articles identified through the processes of identification, screening, and selection based on predetermined inclusion criteria. Of the 1,000 articles initially identified, 28 articles comprising 30 effect sizes from SINTA-indexed national journals published between 2020 and 2024 met the eligibility criteria and were included in the analysis. Data were analyzed using JASP version 0.18.1.0 through effect size calculation, heterogeneity testing, summary effect size estimation, moderator analysis, forest plot analysis, funnel plot analysis, and publication bias assessment. The findings revealed that the Problem Based Learning model had a positive effect on students' critical thinking skills and self-efficacy in mathematics learning. Overall, the summary effect size for critical thinking skills was 0.738, indicating a moderate effect, while the summary effect size for self-efficacy was 1.101, indicating a large effect. Based on the moderator analysis across educational levels, the effect sizes were 0.824 for elementary school, 0.916 for junior secondary school, and 0.837 for senior secondary school, all of which were classified as large effects. However, the moderator analysis yielded $Q_m = 0,517$, $df = 2$, and $p = 0.772$ ($p > 0.05$), indicating that there was no statistically significant difference in the effect of the Problem Based Learning model across educational levels. Therefore, the findings suggest that the Problem Based Learning model is effective in improving students' critical thinking skills and self-efficacy in mathematics learning across different educational levels..

Keywords: *Critical thinking skills, mathematics learning, meta analysis, Problem Based Learning, self-efficacy.*