

**PENGARUH MODEL *BLENDED LEARNING* TERHADAP KEMAMPUAN  
PEMECAHAN MASALAH MATEMATIS SISWA: STUDI META-ANALISIS**

**TESIS**

Diajukan untuk memenuhi sebagian syarat untuk memperoleh gelar  
Magister Pendidikan Program Studi Pendidikan Matematika



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Sebuah Tesis yang diajukan untuk memenuhi salah satu syarat memperoleh gelar  
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Agustus 2021

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## ABSTRAK

**Muhammad Fachri B. Paloloang (2021).** Pengaruh Model *Blended Learning* terhadap Kemampuan Pemecahan Masalah Matematis Siswa: Studi Meta-Analisis.

Penelitian ini bertujuan untuk menganalisis pengaruh model *Blended Learning* (BL) terhadap kemampuan pemecahan masalah matematis (KPMM) siswa. Banyak penelitian tentang KPMM siswa dengan penerapan model BL di Indonesia hingga saat ini, dan beberapa laporan atau temuan dari studi tersebut menunjukkan hasil yang tidak konsisten. Sementara itu, pembuat kebijakan pendidikan membutuhkan deskripsi dan informasi yang akurat dan tepat tentang hal itu. Untuk meringkas, memperkirakan, dan mengevaluasi efek keseluruhan dari penggunaan model BL pada KPMM siswa, teknik meta-analisis digunakan. Data diperoleh dari studi primer yang penelitiannya dilakukan di Indonesia dan telah dipublikasikan di jurnal nasional atau internasional selama rentang tahun 2015-2021. Indeks ukuran efek menggunakan rumus Hedges'  $g$ , dan analisis statistik dibantu oleh perangkat lunak *Comprehensive Meta-Analysis* V.03. Metode penelitian yang digunakan adalah *systematic review* dengan teknik kuantitatif meta-analisis terhadap analisis hasil penelitian ilmiah pada jurnal nasional maupun internasional dengan sumber data penelitian sebanyak 17 artikel yang memenuhi kriteria inklusi dan direduksi menjadi 16 artikel yang tidak terdapat bias. Pengujian variasi ukuran efek dilakukan dengan menganalisis empat karakteristik studi, yaitu ukuran sampel, jenjang pendidikan, media pembelajaran grup BL, dan tahun penelitian. Berdasarkan analisis, ukuran efek keseluruhan ( $g$ ) adalah 1,142 berkategori efek besar menurut model efek acak. Berarti, penggunaan BL berpengaruh positif terhadap KPMM siswa. Berdasarkan karakteristik studi ukuran sampel, diperoleh bahwa ukuran sampel yang terlampaui besar dapat menyebabkan bias publikasi. Temuan lain, berdasarkan hasil penelitian ditemukan bahwa model BL tidak memiliki perbedaan terhadap KPMM siswa yang disebabkan oleh faktor ukuran sampel, jenjang pendidikan, media pembelajaran grup BL, dan tahun penelitian.

**Kata Kunci:** Meta-Analisis, Kemampuan Pemecahan Masalah Matematis, *Blended Learning*

## ABSTRACT

**Muhammad Fachri B. Paloloang (2021).** The Effect of Blended Learning Model on Students' Mathematical Problem-Solving Ability: A Meta-Analysis Study.

This study aims to analyze the effect of the Blended Learning (BL) model on students' mathematical problem-solving skill (MPSS). There are many studies on MPSS students with the application of the BL model in Indonesia to date, and several reports or findings from these studies show inconsistent results. Meanwhile, education policy makers need accurate and precise descriptions and information about it. To summarize, estimate, and evaluate the overall effect of using the BL model on MPSS students, a meta-analysis technique was used. The data were obtained from primary studies whose research was conducted in Indonesia and which have been published in national or international journals during the period 2015-2021. The effect size index used the Hedges'  $g$  formula, and statistical analysis was assisted by the Comprehensive Meta-Analysis V.03 software. The research method used is a systematic review with quantitative meta-analysis techniques on the analysis of scientific research results in national and international journals with research data sources as many as 17 articles that meet the inclusion criteria and are reduced to 16 articles that are not biased. The effect size variation was tested by analyzing four study characteristics, namely sample size, education level, learning media for the BL group, and the year of research. Based on the analysis, the overall effect size ( $g$ ) is 1.142 in the large effect category according to the random effects model. It means, the use of BL has a positive effect on MPSS students. Based on the characteristics of the study sample size, it is found that the sample size is too large can cause publication bias. Another finding, based on the results of the study, it was found that the BL model had no difference to the MPSS students caused by factors such as sample size, education level, learning media for the BL group, and the year of research.

**Keywords:** Meta-Analysis, Mathematical Problem-Solving Skill, *Blended Learning*

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**PENGARUH MODEL BLENDED LEARNING TERHADAP KEMAMPUAN PEMECAHAN MASALAH MATEMATIS SISWA: STUDI META-ANALISIS**

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