

## ABSTRAK

**Durasa, Helfra** (2022), *Pengaruh Penerapan Model Problem-Based Learning dan Kemandirian Belajar Terhadap Kemampuan Pemecahan Masalah Matematis dengan Mengontrol Kecemasan Matematis*. Tesis, Penelitian dan Evaluasi Pendidikan, Program Pascasarjana, Universitas Pendidikan Ganesha.

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*Kata-kata kunci:* *Problem-Based Learning*, Kemandirian Belajar, Kemampuan Pemecahan Masalah, Kecemasan Matematis

Penelitian ini bertujuan untuk mengetahui pengaruh penerapan model *problem-based learning* terhadap kemampuan pemecahan masalah matematis, setelah mengontrol kecemasan matematis. Populasi dalam penelitian ini adalah siswa kelas VII SMP Negeri 1 Langke Rembong, Kabupaten Manggarai yang berjumlah 430 orang dan terdistribusi ke dalam 12 kelas. Penentuan sampel pada penelitian ini menggunakan teknik *random sampling*, berdasarkan hasil pengujian kesetaraan antar kelas. Penelitian ini menggunakan jenis penelitian kuasi eksperimen *posttes only control group*, dengan rancangan penelitian menggunakan desain *treatment by levels 2x2*. Data dalam penelitian ini dikumpulkan dengan menggunakan tes uraian untuk memperoleh data kemampuan pemecahan masalah matematis siswa dan kuesioner untuk memperoleh data kemandirian belajar dan kecemasan matematis siswa. Data dianalisis dengan menggunakan *Two-Way Analysis of Covariance* dengan bantuan program *IBM SPSS 25.0 for Window* pada taraf signifikansi ( $p$ ) = 0,05. Hasil penelitian menunjukkan bahwa: (1) terdapat pengaruh penerapan model *problem-based learning* terhadap kemampuan pemecahan masalah matematis, setelah mengontrol kecemasan matematis, (2) terdapat pengaruh interaksi antara model pembelajaran dan kemandirian belajar terhadap kemampuan pemecahan masalah matematis siswa setelah mengontrol kecemasan matematis, (3) pada siswa yang memiliki kemandirian belajar tinggi, kemampuan pemecahan masalah matematis antara siswa yang mengikuti model *problem-based learning* lebih tinggi daripada siswa yang mengikuti pembelajaran konvensional, setelah mengontrol kecemasan matematis, (4) pada siswa yang memiliki kemandirian belajar rendah, kemampuan pemecahan masalah matematis siswa yang mengikuti model *problem-based learning* lebih rendah daripada siswa yang mengikuti pembelajaran konvensional setelah mengontrol kecemasan matematis. Temuan penelitian ini menunjukkan bahwa penerapan model *problem-based learning* memberikan pengaruh yang signifikan terhadap kemampuan pemecahan masalah matematis siswa, setelah mengontrol kecemasan matematis.

## ABSTRACT

**Durasa, Helfra** (2022), *The Effect of Applying Problem-Based Learning Models and Learning Independence on Mathematical Problem-Solving Ability by Controlling Mathematical Anxiety*. Thesis, Educational Research, and Evaluation, Graduate Program, Ganesha University of Education.

This thesis has been approved and examined by Advisor I: Dr. Ni Made Sri Mertasari, M.Pd., and Advisor II: Dr. I Gusti Ngurah Pujawan, M.Kes.

*Key words:* Problem-Based Learning, Learning Independence, Problem Solving Ability, Mathematical Anxiety

This study aims to determine the influence of the application of the problem-based learning model on the ability to solve mathematical problems after controlling mathematical anxiety. The population in this study was students grade VII SMP Negeri 1 Langke Rembong, Manggarai Regency, which amounted to 430 people, which was distributed into 12 classes. The determination of samples in this study used a random sampling technique, based on the results of equality testing between classes. This study used a type of quasi-experimental research posttest only control group, with a study design using the design of treatment by levels 2x2. The data in this study were collected using a description test to obtain data on students' mathematical problem-solving ability and questionnaires to obtain data on student learning independence and mathematical anxiety. The data were analyzed using a Two-Way Analysis of Covariance with the help of the IBM SPSS 25.0 for Window program at a significance level ( $p$ ) = 0.05. The results showed that: (1) there is an influence of the application of the problem-based learning model on mathematical problem-solving ability, after controlling mathematical anxiety, (2) there is influence of the interaction between the learning model and learning independence on students' mathematical problem-solving ability after controlling mathematical anxiety, (3) in students who have high learning independence, mathematical problem-solving ability among students who follow the problem-based learning model is higher than in students who follow conventional learning after controlling mathematical anxiety, (4) in students who have low learning independence, the mathematical problem-solving ability of students who follow the problem-based learning model is lower than that of students who follow conventional learning after controlling mathematical anxiety. The findings of this study show that the application of problem-based learning models has a significant influence on students' mathematical problem-solving ability, after controlling mathematical anxiety.