

**PENGARUH MODEL PEMBELAJARAN *PROJECT-BASED LEARNING*  
(PjBL) BERBANTUAN *MIND MAPPING* TERHADAP KEMAMPUAN  
PEMECAHAN MASALAH MATEMATIKA SISWA PADA MATERI  
ALJABAR**

Oleh

**Desak Made Sasmita Rasmiani, NIM. 2213011025**

**Program Studi S1 Pendidikan Matematika**

**ABSTRAK**

Penelitian ini dilatarbelakangi oleh rendahnya kemampuan pemecahan masalah matematika siswa. Tujuan dari penelitian ini adalah untuk mengetahui pengaruh model pembelajaran *Project-Based Learning* (PjBL) berbantuan *mind mapping* terhadap kemampuan pemecahan masalah matematika siswa pada materi aljabar. Jenis penelitian ini merupakan penelitian eksperimen semu dengan desain *post-test only control group design*. Populasi penelitian ini adalah seluruh siswa kelas VII SMP Negeri 2 Sawan yang terdiri dari 8 kelas. Sampel penelitian diambil sebanyak dua kelas dengan teknik *cluster random sampling*. Diperoleh kelas VII A sebagai kelas eksperimen yang dibelajarkan menggunakan model pembelajaran *Project-Based Learning* (PjBL) berbantuan *mind mapping* dan kelas VII E sebagai kelas kontrol yang dibelajarkan menggunakan pembelajaran konvensional. Pengujian hipotesis dilakukan menggunakan uji-t sampel independen (*independent samples t-test*) setelah memenuhi uji prasyarat yaitu uji normalitas dan uji homogenitas. Hasil analisis menunjukkan rata-rata nilai *post-test* kelas eksperimen dan kelas kontrol berturut-turut sebesar 73.2 dan 69.6. Nilai  $t_{hitung}$  sebesar 3.048 dan nilai  $t_{tabel}$  sebesar 1.669 pada taraf signifikansi 0.05 dengan  $df = 63$ . Nilai  $t_{hitung} > t_{tabel}$  ( $3.048 > 1.669$ ) yang artinya  $H_0$  ditolak dan  $H_1$  diterima. Hal ini menunjukkan kemampuan pemecahan masalah matematika siswa yang dibelajarkan dengan model pembelajaran *Project-Based Learning* (PjBL) berbantuan *mind mapping* lebih tinggi daripada kelompok siswa yang dibelajarkan dengan pembelajaran konvensional. Dengan demikian, dapat disimpulkan bahwa penerapan model pembelajaran *Project-Based Learning* (PjBL) berbantuan *mind mapping* berpengaruh positif terhadap kemampuan pemecahan masalah matematika siswa kelas VII SMP Negeri 2 Sawan.

**Kata Kunci:** *Project-Based Learning* (PjBL), *mind mapping*, kemampuan pemecahan masalah matematika, aljabar

**THE EFFECT OF PROJECT-BASED LEARNING (PjBL) ASSISTED BY  
MIND MAPPING ON STUDENTS' MATHEMATICAL PROBLEM-  
SOLVING ABILITY IN ALGEBRA**

*By*

**Desak Made Sasmita Rasmiani, NIM. 2213011025**

***Bachelor's Program in Mathematics Education***

**ABSTRACT**

*This study was motivated by the low level of students' mathematical problem-solving ability. The purpose of this study was to determine the effect of the Project-Based Learning (PjBL) model assisted by mind mapping on students' mathematical problem-solving ability in algebra. This research employed a quasi-experimental method with a post-test only control group design. The population of this study consisted of all seventh-grade students of SMP Negeri 2 Sawan, totaling eight classes. The sample was selected using the cluster random sampling technique, resulting in two classes. Class VII A was selected as the experimental group that was taught using the Project-Based Learning (PjBL) model assisted by mind mapping, while Class VII E was selected as the control group that was taught using conventional learning. Hypothesis testing was conducted using the independent samples t-test after fulfilling the prerequisite tests, namely the normality test and homogeneity test. The results of the analysis showed that the average post-test scores of the experimental and control classes were 73.2 and 69.6, respectively. The calculated t-value was 3.048, while the critical t-value was 1.669 at the 0.05 significance level with  $df = 63$ . Since calculated t-value > critical t-value ( $3.048 > 1.669$ ), the null hypothesis ( $H_0$ ) was rejected and the alternative hypothesis ( $H_1$ ) was accepted. This indicates that the mathematical problem-solving ability of students taught using the Project-Based Learning (PjBL) model assisted by mind mapping was higher than that of students taught using conventional learning. Therefore, it can be concluded that the implementation of the Project-Based Learning (PjBL) model assisted by mind mapping has a positive effect on the mathematical problem-solving ability of seventh-grade students at SMP Negeri 2 Sawan.*

**Keywords:** *Project-Based Learning (PjBL), mind mapping, mathematical problem-solving ability, algebra*