

ABSTRAK

Anita Lestari: Penerapan Model Pembelajaran *Problem Based Learning* (PBL) Untuk Meningkatkan Minat Dan Hasil Belajar Pada Elemen Teknik Pemesinan Mesin Bubut Kelas XI TPM SMK Negeri 5 Medan. Skripsi. Fakultas Teknik. Universitas Negeri Medan. 2025.

Penelitian ini bertujuan untuk menganalisis peningkatan hasil belajar siswa kelas XI TPM di SMK Negeri 5 Medan melalui model pembelajaran *Problem-based Learning* dan Diferensiasi pada Elemen Pemesinan Bubut. Jenis penelitian ini adalah Penelitian Tindakan Kelas (PTK) dengan menggunakan pendekatan kuantitatif dengan dua siklus. Subjek penelitian ini adalah siswa kelas XI TPM SMK Negeri 5 Medan. Teknik pengumpulan data dilakukan dengan menggunakan instrumen berupa angket minat belajar dan tes hasil belajar. Analisis data dilakukan melalui statistik deskriptif dan uji nonparametrik menggunakan Uji *Mann-Whitney U*, *Spearman Rank Correlation* dan *Wilcoxon Signed-Rank Test*. Hasil penelitian menunjukkan adanya peningkatan skor hasil belajar yang signifikan dengan model PBL dan Diferensiasi dengan skor rata-rata 91,1 dan 81,9 dengan nilai *Asymp. Sig. (2-tailed)* sebesar $< 0,001$, yang berarti model PBL lebih efektif dibandingkan Diferensiasi dalam meningkatkan hasil belajar. Selanjutnya, hasil uji *Wilcoxon Signed-Rank Test* untuk peningkatan hasil belajar pada siklus I dan siklus II menunjukkan nilai $Z = -4,787$ dan $p\text{-value} < 0,001$ yang berarti adanya peningkatan yang signifikan setelah penerapan PBL pada siklus II. Namun, hasil uji *Spearman* mengindikasikan bahwa minat belajar dan hasil belajar tidak terdapat hubungan signifikan dengan nilai koefisien korelasi 0,177 dengan *Sig.* 0,350. Maka, penelitian ini menunjukkan keberhasilan penerapan model PBL dibandingkan Diferensiasi.

Kata Kunci: *Problem-based Learning*, Diferensiasi, Hasil Belajar, Minat Belajar.



ABSTRACT

Anita Lestari: Application of Problem Based Learning (PBL) Learning Model To increase Interest and Outcomes in Lathe Machining Engineering Element of Class XI TPM SMK Negeri 5 Medan. Thesis. Faculty of Engineering. Universitas Negeri Medan. 2025.

This study aims to analyse the improvement of student learning outcomes in Elemen Pemesinan Bubut (Lathe Machining Elements) for 11th-grade TPM students at SMK Negeri 5 Medan through the implementation of Problem-based Learning (PBL) and Differentiated Instruction. This research utilized a Classroom Action Research (CAR) design with a quantitative approach, conducted in two cycles. The subjects of this study were 11th-grade TPM students at SMK Negeri 5 Medan. Data collection techniques involved instruments in the form of a learning interest questionnaire and learning outcome tests. Data analysis was performed using descriptive statistics and nonparametric tests, specifically the Mann-Whitney U Test, Spearman Rank Correlation, and Wilcoxon Signed-Rank Test. The research findings indicate a significant increase in learning outcome scores with both PBL and Differentiated Instruction models, showing average scores of 91.1 and 81.9, respectively. The Asymp. Sig. (2-tailed) value of < 0.001 suggests that the PBL model was more effective than Differentiated Instruction in enhancing learning outcomes. Furthermore, the results of the Wilcoxon Signed- Rank Test for the improvement of learning outcomes between Cycle I and Cycle II revealed a Z-value of -4.787 and a p-value of < 0.001 , signifying a significant increase after the implementation of PBL in Cycle II. However, the Spearman correlation test indicated no significant relationship between learning interest and learning outcomes, with a correlation coefficient of 0.177 and a significance of 0.350. Therefore, this study demonstrates the successful application of the PBL model compared to Differentiated Instruction.

Keywords: Problem-based Learning, Differentiated Instruction, Learning Outcomes, Learning Interest.

