

**EFEKTIVITAS MODEL PEMBELAJARAN PROYEK
(PROJECT BASED LEARNING) TERHADAP PENINGKATAN
PEMAHAMAN KONSEPTUAL DAN KETERAMPILAN
PRAKTIS SISWA SMK NEGERI 3 SINGARAJA**

Oleh

Jesika Putri, NIM 2215061010

Program Studi Pendidikan Teknik Elektro

ABSTRAK

Penelitian ini bertujuan untuk menganalisis efektivitas model pembelajaran berbasis proyek (*Project Based Learning* / PjBL) terhadap peningkatan pemahaman konseptual dan keterampilan praktis siswa Sekolah Menengah Kejuruan pada mata pelajaran instalasi listrik. Penelitian ini menggunakan pendekatan kuantitatif dengan desain *quasi experiment* tipe *non-equivalent control group design*. Subjek penelitian terdiri atas dua kelompok, yaitu kelas eksperimen yang diberikan perlakuan menggunakan model *Project Based Learning* (PjBL) dan kelas kontrol yang menggunakan pembelajaran konvensional. Instrumen penelitian yang digunakan meliputi tes pemahaman konseptual dan lembar observasi keterampilan praktis. Teknik analisis data menggunakan uji-t setelah terlebih dahulu dilakukan uji prasyarat analisis, yaitu uji normalitas dan uji homogenitas. Hasil penelitian menunjukkan bahwa rata-rata pemahaman konseptual siswa pada kelas eksperimen sebesar 85,64, lebih tinggi dibandingkan dengan kelas kontrol sebesar 79,09. Berdasarkan hasil uji-t diperoleh nilai t hitung sebesar 4,145 lebih besar daripada t tabel sebesar 1,998 pada taraf signifikansi 0,05, sehingga terdapat perbedaan yang signifikan antara kedua kelompok. Pada aspek keterampilan praktis, rata-rata nilai kelas eksperimen sebesar 84,70, lebih tinggi dibandingkan kelas kontrol sebesar 74,30. Hasil uji-t menunjukkan bahwa nilai t hitung sebesar 7,312 lebih besar daripada t tabel sebesar 1,998 pada taraf signifikansi 0,05. Berdasarkan hasil tersebut, dapat disimpulkan bahwa model pembelajaran *Project Based Learning* (PjBL) berpengaruh signifikan terhadap peningkatan pemahaman konseptual dan keterampilan praktis siswa, serta lebih efektif dibandingkan dengan pembelajaran konvensional pada mata pelajaran instalasi listrik di SMK Negeri 3 Singaraja.

Kata kunci: *Project Based Learning*, pemahaman konseptual, keterampilan praktis, instalasi listrik.

***THE EFFECTIVENESS OF THE PROJECT-BASED LEARNING
MODEL (PROJECT BASED LEARNING) IN IMPROVING
CONCEPTUAL UNDERSTANDING AND PRACTICAL SKILLS
OF STUDENTS AT SMK NEGERI 3 SINGARAJA***

By

Jesika Putri, Student ID 2215061010

Electrical Engineering Education Study Program

ABSTRACT

This study aims to analyze the effectiveness of the Project-Based Learning (PjBL) model in improving the conceptual understanding and practical skills of vocational high school students in the subject of electrical installation. The research employed a quantitative approach with a quasi-experimental design, specifically the non-equivalent control group design. The subjects of the study consisted of two groups: an experimental class that received treatment using the Project-Based Learning (PjBL) model and a control class that was taught using conventional learning methods. The research instruments included a conceptual understanding test and an observation sheet for practical skills. Data analysis techniques involved the use of an independent sample t-test, preceded by prerequisite tests, namely normality and homogeneity tests. The results of the study indicate that the average score of students' conceptual understanding in the experimental class was 85.64, which is higher than that of the control class at 79.09. Based on the results of the t-test, the calculated t-value (4.145) was greater than the t-table value (1.998) at a significance level of 0.05, indicating a significant difference between the two groups. In terms of practical skills, the average score of the experimental class was 84.70, which is also higher than the control class at 74.30. The t-test results showed that the calculated t-value (7.312) exceeded the t-table value (1.998) at a significance level of 0.05.

Based on these findings, it can be concluded that the Project-Based Learning (PjBL) model has a significant effect on improving students' conceptual understanding and practical skills, and is more effective than conventional learning methods in the electrical installation subject at SMK Negeri 3 Singaraja.

Keywords: *Project Based Learning, conceptual understanding, practical skills, electrical installation.*