

**PENERAPAN MODEL PEMBELAJARAN *PjBL* BERBANTUAN ALAT  
INSTALASI LISTRIK BERBASIS *AUTOMATIC SMART CONTROL  
BUILDING* UNTUK MENINGKATKAN HASIL BELAJAR KOMPONEN  
DASAR INSTALASI PENERANGAN LISTRIK SISWA  
SMK N 3 SINGARAJA**

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**ABSTRAK**

Penelitian dilaksanakan dimulai dari minimnya hasil belajar murid di pelajaran Konsentrasi Keahlian di SMK Negeri 3 Singaraja. Kegiatannya ditujukan agar memberikan peningkatan hasil belajar murid dengan pengimplementasian Model Pembelajaran *PjBL (Project Based Learning)* dengan metode demonstrasi memanfaatkan alat trainer Instalasi Listrik *Automatic Smart Control*. Macam penelitian yang dikerjakan yakni Penelitian Tindakan Kelas (PTK) bermodel Kemmis bersama Taggart, yang melalui dua siklus yang dilaksanakan dalam empat pembelajaran. Subjek yang diteliti yakni 33 murid kelas XI TKL-2. Data dikumpulkan dengan cara tes esai, pengobservasian kegiatan murid bersama pendidik, serta pendokumentasian. Deskriptif kuantitatif dimanfaatkan dalam menganalisis data yang diperoleh. Indikator keberhasilan ditandai dengan peningkatan hasil belajar, berrata-rata nilai disiklus I sejumlah 79,34 serta siklus II sejumlah 80,44. Penyelesaian klasik pun bertambah mulai 78,78% di siklus I ke 87,87% di siklus II. Melalui inilah, pengimplementasian model pembelajaran *PjBL* berbantuan alat trainer dengan metode demonstrasi mampu memberikan peningkatan hasil belajar murid di pelajaran Konsentrasi Keahlian di SMK Negeri 3 Singaraja tahun ajaran 2024/2025.

**Kata Kunci : *PjBL (Project Based Learning)*, Alat Trainer *Automatic Smart Control Building*, Hasil Belajar, Teknik Ketenagalistrikan**

**IMPLEMENTATION OF ELECTRICAL INSTALLATION TOOL-ASSISTED  
PjBL LEARNING MODEL BASED ON AUTOMATIC SMART CONTROL  
BUILDING TO IMPROVE LEARNING OUTCOMES OF BASIC  
COMPONENTS OF ELECTRICAL LIGHTING INSTALLATION OF  
STUDENTS OF SMK N 3 SINGARAJA**

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**ABSTRACT**

*The research was conducted starting from the lack of student learning outcomes in the Expertise Concentration lesson at SMK Negeri 3 Singaraja. The activity was aimed at providing an increase in student learning outcomes by implementing the PjBL (Project Based Learning) Learning Model with a demonstration method utilizing the Automatic Smart Control Electrical Installation trainer tool. The type of research carried out was Classroom Action Research (PTK) modeled Kemmis with Taggart, which went through two cycles carried out in four learning sessions. The subjects studied were 33 students of class XI TKL-2. Data were collected by means of essay tests, observing student activities with educators, and documentation. Quantitative descriptive was used in analyzing the data obtained. The indicator of success was marked by an increase in learning outcomes, with an average value in cycle I of 79.34 and cycle II of 80.44. Classical solutions also increased from 78.78% in cycle I to 87.87% in cycle II. Through this, the implementation of the PjBL learning model assisted by trainer tools with demonstration methods is able to provide an increase in student learning outcomes in the Expertise Concentration lesson at SMK Negeri 3 Singaraja in the 2024/2025 academic year.*

**Keywords: PjBL (Project Based Learning), Alat Trainer Automatic Smart Control Building, Hasil Belajar, Teknik Ketenagalistrikan**