

**PENERAPAN PENDIDIKAN TEKNOLOGI DASAR PADA *MODELING INSTRUCTION* MELALUI PENDEKATAN SAINTIFIK BERBANTUAN TRAINER LISTRIK RUMAH TANGGA UNTUK MENINGKATKAN PEMAHAMAN KONSEP DAN *SELF-EFFICACY* SISWA SMK PADA PEMBELAJARAN FISIKA MATERI LISTRIK DINAMIS**

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**ABSTRAK**

Penelitian ini bertujuan untuk mendapatkan kajian tentang penerapan pendidikan teknologi dasar pada *modeling instruction* melalui pendekatan saintifik berbantuan trainer listrik rumah tangga untuk meningkatkan pemahaman konsep dan *self-efficacy* siswa SMK pada pembelajaran fisika materi listrik dinamis. Metode penelitian yang digunakan dalam penelitian ini adalah *pre-experiment* dengan desain penelitian yang digunakan adalah *one-group pretest-postest*. Subjek dalam penelitian ini adalah 31 siswa kelas XI TIPTL 3 di salah satu SMK Negeri di Bandung. Penelitian ini menggunakan perangkat instrumen tes pemahaman konsep dan non-tes *self-efficacy*. Hasil penelitian menunjukkan adanya peningkatan pemahaman konsep dan *self-efficacy* siswa. Pemahaman konsep siswa pada materi listrik dinamis setelah mengikuti pembelajaran *modeling instruction* menunjukkan peningkatan rata-rata skor N-gain sebesar 0,68 termasuk kategori sedang. *Self-efficacy* siswa pada materi listrik dinamis setelah mengikuti pembelajaran pendidikan teknologi dasar pada *modeling instruction* melalui pendekatan saintifik berbantuan trainer listrik rumah tangga menunjukkan peningkatan rata-rata skor N-gain sebesar 0,54 termasuk kategori sedang. Hasil secara umum, 84,82% siswa memberikan tanggapan yang positif terhadap penerapan pendidikan teknologi dasar pada *modeling instruction* melalui pendekatan saintifik berbantuan trainer listrik rumah tangga. Dapat disimpulkan bahwa, penerapan pendidikan teknologi dasar pada *modeling instruction* melalui pendekatan saintifik berbantuan trainer listrik rumah tangga dapat meningkatkan pemahaman konsep dan *self-efficacy* siswa SMK pada pembelajaran fisika materi listrik dinamis.

Kata Kunci : *Modeling Instruction, Pendidikan Teknologi Dasar, Pendekatan Saintifik, Trainer Listrik Rumah Tangga, Pemahaman konsep, Self- Efficacy, Listrik Dinamis*

**IMPLEMENTATION OF BASIC TECHNOLOGY EDUCATION IN MODELING  
INSTRUCTION THROUGH SAINTIFIC APPROACH ASSISTANCE OF  
HOUSEHOLD ELECTRICAL TRAINERS TO INCREASE UNDERSTANDING  
CONCEPT AND SELF-EFFICACY STUDENTS SMK IN LEARNING PHYSICS  
OF DYNAMIC ELECTRICITY MATTER**

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**ABSTRACT**

This study aims to get an analysis of the implementation of basic technology education in modeling instruction through saintific approach assistance household electrical trainer to improve of concept understanding and self-efficacy of students' on learning physics of electricity dynamic matter matter. The research method used in this research is pre-experiment with research design used was one-group pretest-posttest. Subjects in this study were 31 students of class XI TIPTL 3 in Vocational High School at Bandung. This research uses the instrument of conceptual understanding test and self-efficacy non-tes. The results of this study indicate an increase in conceptual understanding and achievement of optimal self-efficacy. Conceptual understanding of students on dynamic electrical matter after following the modeling instruction showed an increase in the average score of N-gain of 0.68, including the medium category. Student *self-efficacy* in dynamic electrical matter after following basic technology education in modeling instruction through saintific approach assistance household electrical trainer learning showed an increase in average N-gain score of 0.54 including medium category. Generally, 84,42% students responded positively to the implication of basic technology education in modeling instruction through saintific approach assistance household electrical trainer. It can be concluded that the implication of basic technology education in modeling instruction through saintific approach assistance household electrical trainer assistance household electrical trainer can improve of concept understanding and self-efficacy of students' on learning physics of electricity dynamic matter.

Keywords: *modeling instruction, basic technology education, saintific approach assistance household electrical trainer, conceptual of understanding, self-efficacy, electricity dynamic*