

ABSTRAK

Zihan Syabila: *Pengembangan E-Modul Mata Pelajaran Dasar-dasar Teknik Ketenagalistrikan untuk Meningkatkan Hasil Belajar pada Teori Dasar Listrik dan Bahan Ketenagalistrikan Kelas X Teknik Instalasi Tenaga Listrik (TITL) di SMK Negeri 1 Percut Sei Tuan*. Skripsi. Fakultas Teknik Universitas Negeri Medan. 2025.

Penelitian ini bertujuan mengembangkan E-Modul interaktif berbasis Canva pada materi Teori Dasar Listrik dan Bahan Ketenagalistrikan untuk siswa kelas X TITL di SMK Negeri 1 Percut Sei Tuan. Penelitian ini merupakan Research and Development (R&D) dengan model 4D (*Define, Design, Develop, Disseminate*), dipadukan dengan model Dick and Carey. Uji coba terbatas dilakukan pada 29 siswa. Pengumpulan data dilakukan melalui validasi ahli, angket respon siswa, serta tes pretest dan posttest. Rata-rata hasil validasi ahli materi menunjukkan nilai 87,43%, dan validasi ahli media sebesar 91,09%, yang semuanya termasuk kategori sangat baik. Respon siswa terhadap E-Modul mencapai 84,02% dan dikategorikan sangat baik. Selain itu, efektivitas E-Modul diuji melalui analisis N-Gain. Rata-rata nilai *pretest* sebesar 62,57 dan *posttest* sebesar 91,37, sehingga diperoleh N-Gain sebesar 0,7694 atau 76,94% (kategori tinggi). Dari 29 siswa, 21 siswa (72,41%) termasuk kategori peningkatan tinggi, dan 8 siswa (27,59%) kategori sedang. Dari hasil tersebut dapat disimpulkan bahwa E-Modul interaktif berbasis Canva yang dikembangkan sangat layak, praktis, dan efektif dalam meningkatkan hasil belajar siswa. E-Modul ini sesuai digunakan dalam pembelajaran berbasis teknologi di SMK.

Kata Kunci: E-Modul, Canva, Dasar-Dasar Teknik Ketenagalistrikan, Hasil Belajar, N-Gain



ABSTRACT

Zihan Syabila: *Development of an E-Module for the Basic Electrical Engineering Subject to Improve Learning Outcomes on Basic Electrical Theory and Electrical Materials for Grade X Electrical Power Installation Engineering (TITL) Students at SMK Negeri 1 Percut Sei Tuan. Undergraduate Thesis. Faculty of Engineering, State University of Medan. 2025.*

This study aims to develop an interactive E-Module based on Canva for the topics of Basic Electrical Theory and Electrical Materials for Grade X Electrical Power Installation Engineering (TITL) students at SMK Negeri 1 Percut Sei Tuan. This research is a type of Research and Development (R&D) using the 4D model (Define, Design, Develop, Disseminate), integrated with the Dick and Carey instructional design model. A limited trial was conducted on 29 students. Data were collected through expert validation, student response questionnaires, and pretest-posttest assessments. The average result of material expert validation was 87.43%, while media expert validation scored 91.09%, both categorized as "very good." Student responses to the E-Module reached 84.02%, also categorized as "very good." In addition, the effectiveness of the E-Module was analyzed using the N-Gain formula. The average pretest score was 62.57, and the posttest score was 91.37, resulting in an N-Gain of 0.7694 or 76.94%, which falls into the high category. Of the 29 students, 21 (72.41%) experienced high improvement, while 8 students (27.59%) showed moderate improvement. Based on these results, it can be concluded that the Canva-based interactive E-Module developed in this study is highly feasible, practical, and effective in improving student learning outcomes. This E-Module is well-suited for use in technology-integrated learning environments in vocational schools.

Keywords: *E-Module, Canva, Basic Electrical Theory, Learning Outcomes, N-Gain.*

