

ABSTRAK

Yoga Aryatama. 2026. Pengembangan Modul Pembelajaran Trainer Instalasi Motor Listrik Berbasis Software Simurelay Untuk Meningkatkan Kreativitas Siswa. Skripsi. Program Studi Pendidikan Teknik Elektro, FKIP, Universitas PGRI Madiun. Dosen Pembimbing (I) Ir. Sulistyaning Kartikawati, M.M., M.Pd., dosen Pembimbing (II) Pramudya Ardi S.Pd., M.Pd.

Penelitian ini bertujuan mengembangkan dan menguji kelayakan modul pembelajaran trainer instalasi motor listrik berbasis *software SimuRelay* untuk meningkatkan kreativitas siswa kelas XI Teknik Instalasi Tenaga Listrik (TITL) SMK Gamaliel 1 Madiun. Penelitian ini menggunakan metode *Research and Development* (R&D) dengan model pengembangan 4D (*define, design, develop, disseminate*). Data dikumpulkan melalui observasi, wawancara, dokumentasi, dan angket validasi ahli media, ahli materi, serta angket respon siswa yang dianalisis menggunakan skala Likert. Hasil penelitian menunjukkan bahwa modul yang dikembangkan memperoleh nilai kelayakan sebesar 95,1% dari ahli media dan 97,01% dari ahli materi, keduanya termasuk kategori "Sangat Layak". Respon siswa terhadap modul mencapai 92,4% dengan kategori "Sangat Setuju", dan hasil penilaian kreativitas siswa mencapai rata-rata 80% dengan kriteria "Baik". Dengan demikian, modul pembelajaran trainer instalasi motor listrik berbasis *software SimuRelay* dinyatakan sangat layak digunakan sebagai bahan ajar praktikum dan efektif mendukung peningkatan kreativitas siswa dalam pembelajaran instalasi motor listrik.

Kata kunci: modul pembelajaran, *software SimuRelay*, instalasi motor listrik, kreativitas siswa, R&D 4D.

ABSTRAK

Yoga Aryatama. 2026. Development of a Simurelay Software-Based Learning Module for Electric Motor Installation Trainers to Enhance Student Creativity. Undergraduate Thesis. Electrical Engineering Education Study Program, Faculty of Teacher Training and Education (FKIP), Universitas PGRI Madiun. Supervisor (I): Ir. Sulistyaning Kartikawati, M.M., M.Pd.; Supervisor (II): Pramudya Ardi, S.Pd., M.Pd.

This study aims to develop and test the feasibility of a SimuRelay software-based electric motor installation trainer learning module designed to enhance the creativity of Grade XI students in the Electrical Power Installation Engineering (TITL) program at SMK Gamaliel 1 Madiun. The study employs the Research and Development (R&D) method using the 4D development model (define, design, develop, disseminate). Data were collected through observation, interviews, documentation, and validation questionnaires completed by media and subject matter experts, as well as student response questionnaires analyzed using a Likert scale. The results indicate that the developed module achieved feasibility scores of 95.1% from media experts and 97.01% from subject matter experts, both falling into the "Highly Feasible" category. Student response to the module reached 92.4% (categorized as "Strongly Agree"), and the assessment of student creativity yielded an average score of 80% (categorized as "Good"). Consequently, the SimuRelay software-based electric motor installation trainer learning module is deemed highly feasible for use as practical instructional material and effective in fostering student creativity within electric motor installation lessons.

Keywords: learning module, SimuRelay software, electric motor installation, student creativity, R&D 4D.

