ABSTRAK

Rizka Nanda: **Pengembangan Multimedia Pembelajaran Instalasi Penerangan Listrik Untuk Meningkatkan Hasil Belajar Siswa Kelas XI TITL SMKN 1 Percut Sei Tuan. Program Studi Pendidikan Pendidikan Teknik Elektro Jurusan Pendidikan Teknik Elektro Fakultas Teknik Universitas Negeri Medan.**

Penelitian ini bertujuan untuk: (1) Mengetahui proses pembuatan produk multimedia yang dikembangkan pada mata pelajaran Instalasi Penerangan Listrik untuk kelas XI kompetensi keahlian Teknik Instalasi Tenaga Listrik. (2) Mengetahui hasil kelayakan ahli materi dan kelayakan ahli media terhadap multimedia pembelajaran yang akan diterapkan di mata pelajaran Instalasi Penerangan Listrik. (3) Mengetahui peningkatan hasil belajar siswa pada mata pelajaran Instalasi Penerangan Listrik dengan menggunakan multimedia yang diterapkan.

Penelitian pengembangan ini menggunakan model ADDIE. Adapun langkah ADDIE yang meliputi pertama *analysis* tahap mengetahui kebutuhan, kedua *design* atau merencanakan media yang dibutuhkan, ketiga *development* yakni merancang produk yang dibutuhkan, *implementation* tahap dimana produk ini diuji cobakan dan *evaluation* tahap pengukuran ketercapaian suatu penelitian. Validasi dilakukan oleh pakar dibidangnya ada ahli media dan ahli materi. Uji coba dilakukan terdiri dari uji *one to one trial*, uji *small trial*, dan uji *filed trial*. Subjek partisipasi pada penelitian ini ada 28 peserta didik di kelas XI Teknik Instalasi Tenaga Listrik SMKN 1 Percut Sei Tuan. Teknik pengumpulan data menggunakan obsevasi, wawancara, angket skala dan tes tertulis.

Hasil penelitian ini diketahui membutuhkan multimedia yang menarik dan menyenangkan serta membutuhkan pengembangan multimedia berbasis teknologi, maka peneliti mengembangankan multmedia pembelajaran untuk meningkatkan hasil belajar siswa kelas XI Teknik Instalasi Tenaga Listrik SMKN 1 Percut Sei Tuan. Multiedia pembelajaran yang layak digunakan berdasarkan hasil validasi ahli media dan ahli materi.Hasil uji coba dari ahli multimedia pembelajaran instalasi penerangan listrik di kelas XI yaitu sebesar 4,35 dan termasuk ke dalam kategori "*sangat layak*". Sedangkan hasil penilaian dari ahli materi instalasi penerangan listrik yang terdapat pada multimedia pembelajaran yaitu sebesar 4,35 dan termasuk ke dalam kategori "*sangat layak*". Penggunaan multimedia pembelajaran menggunakan Adobe Flash dikembangkan efektif meningkat pada hasil belajar siswa. Hasil perhitungan hasil belajar Ngain 0,60 yang termasuk dalam kategori Sedang. Rata-rata posttest lebih tinggi dari pada nilai pretest yaitu 88.86 > 71.60 dengan peningkatan sebesar 17.26.

Kata Kunci: Multimedia Pembelajaran, Hasil Belajar, Instalasi Penerangan Listrik.

ABSTRACK

Rizka Nanda*: Development of Multimedia Learning on Electrical Lighting Installation to Improve Learning Outcomes for Class XI TITL SMKN 1 Percut Sei Tuan Students. Electrical Engineering Education Study Program, Department of Electrical Engineering Education, Faculty of Engineering, Medan State University.*

This research aims to: (1) Understand the process of making multimedia products developed in the Electrical Lighting Installation subject for class XI Electrical Power Installation Engineering skills competency. (2) Knowing the results of the suitability of material experts and the suitability of media experts for learning multimedia that will be applied in the Electrical Lighting Installation subject. (3) Knowing the increase in student learning outcomes in the Electrical Lighting Installation subject using applied multimedia.

This development research uses the ADDIE model. The ADDIE steps include the first analysis stage of knowing the needs, the second the design or planning the media needed, the third development namely designing the required product, the implementation stage where the product is tested and the evaluation stage of measuring the achievement of a research. Validation is carried out by experts in their fields, including media experts and material experts. The trials carried out consisted of one to one trial, small trial, and filed trial. The participating subjects in this research were 28 students in class XI Electrical Power Installation Engineering at SMKN 1 Percut Sei Tuan. Data collection techniques used observation, interviews, scale questionnaires and written tests.

The results of this research show that it requires interesting and fun multimedia and requires the development of technology-based multimedia, so the researchers developed learning multimedia to improve the learning outcomes of class XI students in Electrical Power Installation Engineering at SMKN 1 Percut Sei Tuan. Learning multimedia that is suitable for use is based on the validation results of media experts and material experts. The test results from multimedia experts learning electrical lighting installations in class XI are 4.35 and are included in the "very feasible" category. Meanwhile, the assessment results from experts on electrical lighting installation material contained in the learning multimedia were 4.35 and included in the "very feasible" category. The use of learning multimedia using Adobe Flash was developed to effectively increase student learning outcomes. The results of the calculation of Ngain learning outcomes are 0.60 which is included in the Medium category. The posttest average was higher than the pretest score, namely 88.86 > 71.60 with an increase of 17.26.

Keywords: Learning Multimedia, Learning Outcomes, Electrical Lighting Installation..