

ABSTRAK

Bima Mustaqim. NIM. 8236122006. Pengembangan Website Berbasis PACTA Pada Mata Pelajaran Instalasi Motor Listrik. Program Studi Teknologi Pendidikan, Program Pascasarjana Universitas Negeri Medan, 2025.

Penelitian ini bertujuan untuk mengembangkan dan menganalisis kelayakan, kepraktisan, serta keefektifan sebuah *website* berbasis model pembelajaran PACTA (*Phenomenon, Assumption, Construct Modelling of System, Tracking and Assessment*) dalam menunjang pembelajaran mata pelajaran Instalasi Motor Listrik (IML) di SMKS Sinar Husni 2 TR Labuhan Deli. Permasalahan utama yang diidentifikasi adalah rendahnya hasil belajar siswa, khususnya pada aspek teori, akibat pemisahan antara pembelajaran teori dan praktik serta kurang menariknya metode pembelajaran yang digunakan. Untuk mengatasi permasalahan tersebut, dikembangkanlah multimedia pembelajaran *website* yang terintegrasi dengan pendekatan PACTA. Penelitian ini menggunakan metode *Research and Development* (R&D) dengan model pengembangan ADDIE (*Analysis, Design, Development, Implementation, Evaluation*). Teknik pengumpulan data dilakukan melalui observasi, wawancara, angket, dan tes. Uji kelayakan dilakukan oleh sembilan orang ahli, terdiri dari ahli media, ahli materi, dan ahli desain pembelajaran, yang menghasilkan nilai kelayakan sebesar 89,67% dan termasuk kategori sangat layak. Tingkat kepraktisan diperoleh dari respons guru sebesar 96% dan siswa sebesar 88%, sehingga dikategorikan sangat praktis. Sementara itu, tingkat efektivitas terdapat ada perbedaan hasil belajar siswa yang diajar dengan multimedia *website* berbasis PACTA (eksperimen 1) dengan hasil belajar siswa yang diajar dengan multimedia *website* (eksperimen 2). Kemudian melalui uji N-Gain didapatkan nilai 64%, yang dimana multimedia berbasis PACTA termasuk dalam kategori cukup efektif. Hasil penelitian ini menunjukkan bahwa pengembangan *website* pembelajaran berbasis PACTA dapat menjawab kebutuhan pembelajaran abad ke-21 di SMK, baik dari segi konten, pendekatan pembelajaran, maupun pemanfaatan teknologi digital yang adaptif dan fleksibel. Media ini dinilai layak digunakan untuk meningkatkan kualitas pembelajaran Instalasi Motor Listrik di SMKS Sinar Husni 2 TR Labuhan Deli.

Kata Kunci: PACTA, multimedia pembelajaran, instalasi motor listrik, *website*, pembelajaran digital.

ABSTRACT

Bima Mustaqim. Student ID. 8236122006. *Development of PACTA-Based Website on Electric Motor Installation Subjects. Educational Technology Study Program, Postgraduate Program, State University of Medan, 2025.*

This study aims to develop and analyze the feasibility, practicality, and effectiveness of a website based on the PACTA (Phenomenon, Assumption, Construct Modeling of System, Tracking and Assessment) learning model in supporting the learning of Electrical Motor Installation (IML) subjects at SMKS Sinar Husni 2 TR Labuhan Deli. The main problem identified is the low student learning outcomes, especially in the theoretical aspect, due to the separation between theoretical and practical learning and the lack of interesting learning methods used. To overcome these problems, a multimedia learning website integrated with the PACTA approach was developed. This research uses the Research and Development (R&D) method with the ADDIE development model (Analysis, Design, Development, Implementation, Evaluation). Data collection techniques were conducted through observation, interviews, questionnaires, and tests. The feasibility test was conducted by nine experts, consisting of media experts, material experts, and learning design experts, which resulted in a feasibility value of 89.67% and included a very feasible category. The level of practicality was obtained from teacher responses of 96% and students of 88%, so it was categorized as very practical. Meanwhile, the level of effectiveness is that there are differences in the learning outcomes of students taught with PACTA-based website multimedia (experiment 1) with the learning outcomes of students taught with website multimedia (experiment 2). Then through the NGain test, a value of 64% was obtained, where PACTA-based multimedia was included in the moderately effective category. The results of this study indicate that the development of PACTA-based learning websites can answer the needs of 21st century learning in SMK, both in terms of content, learning approaches, and the use of adaptive and flexible digital technology. This media is considered feasible to use to improve the quality of learning Electric Motor Installation at SMKS Sinar Husni 2 TR Labuhan Deli.

Keywords: *PACTA, learning multimedia, electric motor installation, website, digital learning.*