

## ABSTRAK

**CHANDRA PRATAMA:** Pengembangan Media Pembelajaran Sistem Pengisian Daya Baterai Berbasis *Mobile Application Android* Pada Siswa Kelas XI Program Keahlian TKR Di SMKN 1 Percut Sei Tuan. Skripsi. Fakultas Teknik Universitas Negeri Medan. 2023.

Penelitian ini bertujuan untuk: (1) mengembangkan media pembelajaran sistem pengisian daya baterai berbasis *mobile application android* pada siswa kelas XI teknik kendaraan ringan SMK Negeri 1 Percut Sei Tuan; (2) menganalisis hasil kelayakan media pembelajaran sistem pengisian berbasis *mobile application android* menggunakan *Smart Apps Creator 3* berdasarkan validasi/penilaian dari ahli materi, ahli media dan ahli desain pembelajaran; (3) menganalisis penilaian siswa terhadap media pembelajaran sistem pengisian berbasis *mobile application android*.

Penelitian ini dilaksanakan di SMK Negeri 1 Percut Sei Tuan, dengan sampel penelitian adalah siswa kelas XI TKR 1. Jenis penelitian ini adalah *Research and Development* dengan menggunakan model pengembangan ADDIE yang memiliki 5 tahapan yaitu *Analysis* (menganalisis), *Design* (perencanaan), *Development* (pengembangan), *Implementation* (implementasi) dan *Evaluation* (evaluasi).

Hasil penelitian yang diperoleh dalam menguji tingkat kelayakan media pembelajaran berdasarkan ahli media diperoleh nilai rata-rata 3,76 dengan kategori "Sangat Layak", ahli desain pembelajaran diperoleh nilai rata-rata 3,68 dengan kategori "Sangat Layak", ahli materi diperoleh nilai rata-rata 3,80 dengan kategori "Sangat Layak", uji coba *one to one* diperoleh nilai rata-rata 3,40 dengan kategori "Sangat Layak", uji coba kelompok kecil diperoleh nilai rata-rata 3,44 dengan kategori "Sangat Layak" dan uji coba kelompok besar diperoleh nilai rata-rata 3,60 dengan kategori "Sangat Layak". Total nilai rata-rata keseluruhan adalah 3,61 dengan kategori "Sangat Layak". Hasil penelitian yang diperoleh dalam menguji efektivitas media pembelajaran menunjukkan nilai *pre-test* sebesar 46,29 dan nilai *post-test* sebesar 88,23 dengan peningkatan hasil belajar sebesar 41,94 kemudian nilai N-Gain yang didapatkan sebesar 0,78 dengan kategori tinggi dan dengan presentase 78% dalam kategori efektif. Hal ini menunjukkan media pembelajaran berbasis *Mobile Application Android* menggunakan *Smart Apps Creator 3* sangat layak digunakan sebagai media pembelajaran serta efektif untuk meningkatkan hasil belajar siswa pada pembelajaran Pemeliharaan Sistem Pengisian Konvensional di kelas XI TKR SMKN 1 Percut Sei Tuan.

Kata Kunci: Media pembelajaran, Android, Smart Apps Creator 3, Kelayakan, Efektivitas.

## **ABSTRACT**

**CHANDRA PRATAMA:** *Development of Learning Media for a Battery Charging System Based on an Android Mobile Application for Class XI Students of the TKR Skills Program at SMKN 1 Percut Sei Tuan. Thesis. Medan State University Faculty of Engineering. 2023.*

*This research aims to: (1) develop learning media for a battery charging system based on an Android mobile application for class XI light vehicle engineering students at SMK Negeri 1 Percut Sei Tuan; (2) analyze the feasibility results of the Android mobile application-based learning media using Smart Apps Creator 3 based on validation/assessment from material experts, media experts and learning design experts; (3) analyze students' assessments of the Android mobile application-based learning media learning media.*

*This research was conducted at SMK Negeri 1 Percut Sei Tuan, with the research sample being class XI TKR 1 students. This type of research is Research and Development using the ADDIE development model which has 5 stages, namely Analysis (analyzing), Design (planning), Development (development), Implementation (implementation) and Evaluation (evaluation).*

*The research results obtained in testing the level of feasibility of learning media based on media experts obtained an average score of 3.76 in the "Very Appropriate" category, learning design experts obtained an average score of 3.68 in the "Very Appropriate" category, material experts obtained an average score of 3.80 in the "Very Feasible" category, one to one trials obtained an average value of 3.40 in the "Very Eligible" category, small group trials obtained an average value of 3.44 in the "Very Eligible" category and large group trials obtained an average score of 3.60 in the "Very Eligible" category. The total average score is 3.61 in the "Very Decent" category. The research results obtained in testing the effectiveness of learning media showed a pre-test value of 46.29 and a post-test value of 88.23 with an increase in learning outcomes of 41.94 then the N-Gain value obtained was 0.78 in the high category and with a percentage of 78% in the effective category. This shows that the Android Mobile Application based learning media using Smart Apps Creator 3 is very suitable to be used as a learning media and is effective in improving student learning outcomes in learning Conventional Charging System Maintenance in class XI TKR SMKN 1 Percut Sei Tuan.*

*Keywords: Learning media, Android, Smart Apps Creator 3, Feasibility, Effectiveness.*