ABSTRAK

Nursanti Situmorang (8196176002) Pengembangan Modul Listrik Dinamis Berbasis STEM. Program Pascasarjana Universitas Negeri Medan 2022

Penelitian ini bertujuan untuk mengetahui tingkat validitas, kepraktisan dan keefektifan modul pembelajaran yang dikembangkan. Modul pembelajaran listrik dinamis berbasis STEM (*science,technology, Engineering and mathematics*) telah dirancang dan dikembangkan. Sampul dan isi modul didesain semenarik mungkin untuk memudahkan guru mengarahkan siswa dalam belajar fisika. Selain itu, melalui modul ini siswa diharapkan mampu meningkatkan kemampuan berpikir tingkat tinggi terkait listrik dinamis. Penilaian terhadap modul dilakukan untuk mengetahui apakah modul tersebut layak, praktis dan efektif untuk digunakan. Penelitian ini merupakan *Research and Development* (R&D) dengan menggunakan model ADDIE (*Analysis, Design, Development, Implementation and Evaluation)* Ada lima aspek untuk mengukur kevalidan modul ini meliputi aspek kelayakan isi, penyajian, bahasa, elemen STEM, dan kelayakan kegrafikan. Subjek dalam penelitian ini adalah siswa kelas XII IPA1 SMA Negeri 1 LumbanjuluKabupaten Toba. Berdasarkan Hasil Penelitian menunjukkan bahwa Modul pembelajaran listrik dinamis berbasis STEM dengan menggunakan model ADDIE telah memenuhi kriteria valid, praktis dan efektif. Dan dapat diterapkan sebagai Modul pembelajaran Listrik Dinamis berbasis STEM. Berdasarkan hasil penilaian media dan materi pembelajaran didapatkan bahwa modul sangat layak (sangat setuju) untuk digunakan dalam pembelajaran listrik dinamis di sekolah.

Kata kunci: Modul, STEM, ADDIE

ABSTRACT

Nursanti Situmorang (8196176002) Development of STEM-Based Dynamic Electrical Module. Medan State University Postgraduate Program 2022

This study aims to determine the level of validity, practicality and effectiveness of the developed learning module. STEM-based dynamic electricity learning modules (science, technology, engineering and mathematics) have been designed and developed. The cover and content of the module are designed as attractive as possible to make it easier for teachers to direct students in learning physics. In addition, through this module students are expected to be able to improve higher-order thinking skills related to dynamic electricity. An assessment of the module is carried out to find out whether the module is feasible, practical and effective to use. This research is a Research and Development (R&D) model using the ADDIE (Analysis, Design, Development, Implementation and Evaluation) model. There are five aspects to measure the validity of this module including aspects of content feasibility, presentation, language, STEM elements, and graphic feasibility. The subjects in this study were students of class XII IPA1 SMA Negeri 1 Lumbanjulu, Toba Regency. Based on the results of the study, it was shown that the STEM-based dynamic electricity learning module using the ADDIE model had met the valid, practical and effective criteria. And can be applied as a STEM-based Dynamic Electrical learning module. Based on the results of the assessment of the media and learning materials, it was found that the module was very feasible (strongly agree) to be used in dynamic electricity learning in schools.

Keywords: Module, STEM, ADDIE