

ABSTRAK

Samuel Marbun, Nim. 5182122004 (2022). Pengembangan *E-Modul Interaktif Dengan Menggunakan Model Pembelajaran Project Based Learning (PjBL)* Pada Mata Pelajaran Dasar-Dasar Otomotif di Kelas X SMK N 2 Medan.

Pengembangan media pembelajaran sangat dituntut dalam dunia pendidikan, khususnya dengan memanfaatkan teknologi yang semakin canggih. Penelitian ini menghasilkan *e-modul* pembelajaran dengan menggunakan aplikasi *flip PDF* yang valid, praktis pada mata pelajaran Dasar-Dasar Otomotif. Model pengembangan penelitian ini menggunakan ADDIE (*Analysis, Design, Development, Implementation, Evaluation*). Penelitian ini dilakukan di SMK Negeri 2 Medan pada kelas X dengan 36 responden. Validasi ahli media dengan rata-rata 93.75%, validasi ahli desain dengan rata-rata 95.50%, validasi ahli materi dengan rata-rata 95.75% sehingga media sangat layak untuk di uji coba. Respon guru terhadap media 92.00% dan respon siswa 90.75%. Sehingga di dapat, Ketuntasan klasikal siswa mencapai 97.22% termasuk ke dalam kategori efektif. Sehingga penelitian pengembangan *e-modul* interaktif dengan menggunakan model pembelajaran *project based learning (PjBL)* pada mata pelajaran dasar-dasar otomotif di kelas X SMK N 2 medan dinyatakan, valid, praktis dan efektif.

Kata Kunci: Pengembangan, *e-modul*, PjBL, ADDIE, *Flip PDF*

ABSTRACT

Samuel Marbun, Nim. 5182122004 (2022). *Development of Interactive E-Modules Using Project Based Learning (PjBL) Learning Models in Automotive Basics Subjects in Class X SMK N 2 Medan.*

The development of learning media is highly demanded in the world of education, especially by utilizing increasingly sophisticated technology. This research produces e-learning modules using a valid, practical flip PDF application in Basic Automotive subjects. This research development model uses ADDIE (Analysis, Design, Development, Implementation, Evaluation). This research was conducted at SMK Negeri 2 Medan in class X with 36 respondents. Validation of media experts with an average of 93.75%, validation of design experts with an average of 95.50%, material expert validation with an average of 95.75% so that the media is very feasible to be tested. The teacher's response to the media is 92.00% and the student's response is 90.75%. So that it can be, the classical completeness of students reaches 97.22% which is included in the effective category. So that research on the development of interactive e-modules using a project based learning (PjBL) learning model on automotive basics subjects in class X SMK N 2 Medan is declared valid, practical, and effective.

Keywords: Development, e-module, PjBl, ADDIE, Flip PDF