

## ABSTRAK

Imiftah Nurnazarudin. 2025. **PENGEMBANGAN E-MODUL MENGGUNAKAN *FLIP PDF CORPORATE* BERBASIS MODEL *PROBLEM BASED LEARNING* PADA MATERI USAHA DAN ENERGI**

Media pembelajaran E-modul menggunakan *flip PDF corporate* dikembangkan untuk mendukung pembelajaran fisika pada materi usaha dan energi di SMAN 12 Garut yakni disesuaikan dengan perkembangan teknologi dan mengintegrasikannya dengan model pembelajaran agar proses belajar mengajar lebih berkualitas. Tujuan penelitian ini adalah menghasilkan media pembelajaran berbentuk e-modul menggunakan *flip PDF corporate* berbasis model *problem based learning* dengan kriteria valid dan praktis pada tahap *Analysis, Design, Development, dan Implementation*. Jenis penelitian adalah penelitian *Research and Development (R & D)* dengan menggunakan model pengembangan *Analysis, Design, Development, Implementation, Evaluation (ADDIE)*. Teknik pengumpulan data menggunakan wawancara kepada satu guru fisika SMA Negeri 12 Garut, angket uji validitas kepada tiga ahli, angket kepraktisan kepada 30 siswa SMA Negeri 12 Garut. Data dianalisis dengan cara kualitatif dan kuantitatif. Data kualitatif berupa hasil wawancara serta saran dan komentar dari validator sedangkan data kuantitatif berupa hasil penilaian validator dan peserta didik menggunakan *indeks Aiken's V* pada angket kevalidan dan kepraktisan e-modul. Hasil penelitian menunjukkan bahwa rata-rata skor validasi oleh ahli media sebesar 0,89 dengan kriteria valid, skor validasi oleh ahli materi dan digital sebesar 0,81 dengan kriteria valid, dan skor validasi oleh ahli bahasa sebesar 0,83 dengan kriteria valid. Hasil uji kepraktisan siswa mendapatkan hasil persentase 88% dengan kategori sangat praktis. Oleh karena itu, E-modul berbasis model *Problem Based Learning* pada materi Usaha dan Energi memenuhi kriteria valid dan praktis untuk digunakan dalam proses pembelajaran.

Kata kunci: E-Modul, *Flip PDF Corporate*, Media Pembelajaran, *Problem Based Learning*, Usaha dan Energi

## **ABSTRACT**

Imiftah Nurnazarudin. 2025. **DEVELOPMENT OF E-MODULE USING FLIP PDF CORPORATE BASED ON PROBLEM BASED LEARNING MODEL IN WORK AND ENERGY MATERIALS**

*The e-module learning media using Flip PDF Corporate was developed to support physics learning on the topic of Work and Energy at SMAN 12 Garut. It was designed in alignment with technological advancements and integrated with instructional models to enhance the quality of the teaching and learning process. The objective of this study was to develop an e-module using Flip PDF Corporate based on the Problem-Based Learning (PBL) model that meets the criteria of validity and practicality during the stages of Analysis, Design, Development, and Implementation. This research employed a Research and Development (R&D) methodology using the ADDIE development model, which consists of five stages: Analysis, Design, Development, Implementation, and Evaluation. Data collection techniques included interviews with a physics teacher at SMAN 12 Garut, validation questionnaires for three experts, and practicality questionnaires for 30 students at the same school. The data were analyzed both qualitatively and quantitatively. Qualitative data included interview results as well as suggestions and comments from expert validators. Quantitative data were obtained from the expert and student assessments using Aiken's  $V$  index for evaluating the validity and practicality of the e-module. The research findings indicate that the average validation score from the media expert was 0.89 (valid category), from the subject matter and digital content expert was 0.81 (valid category), and from the language expert was 0.83 (valid category). The student's practical test yielded a percentage score of 88%, which falls under the "very practical" category. Therefore, the E-module based on the Problem Based Learning model on the material of Work and Energy meets the valid and practical criteria for use in the learning process.*

*Keywords: E-Module, Flip PDF Corporate, Learning Media, Problem Based Learning, Work and Energy.*