

PENGEMBANGAN *E-MODULE* IPA BERBASIS *PROJECT BASED LEARNING* PADA TOPIK EKOLOGI DAN KEANEKARAGAMAN HAYATI INDONESIA UNTUK SISWA SMP

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ABSTRAK

Penelitian ini bertujuan mendeskripsikan karakteristik dan menganalisis validitas, kepraktisan, dan keterbacaan *e-module* IPA berbasis *project based learning* (PjBL) pada topik ekologi dan keanekaragaman hayati Indonesia untuk siswa SMP. Jenis penelitian yang digunakan adalah R & D (*research and development*) model ADDIE dengan tahapan *Analysis* (analisis), *Design* (desain), *Development* (pengembangan), *Implementation* (implementasi), dan *Evaluation* (evaluasi). Tahapan dalam penelitian dibatasi sampai tahap *development*. Pengujian validitas *e-module* IPA diuji oleh dua orang ahli pendidikan IPA. Pengujian kepraktisan *e-module* diuji oleh lima orang guru IPA. Pengujian keterbacaan *e-module* diuji secara terbatas oleh 11 orang siswa kelas VII SMP/MTs. Instrumen yang digunakan untuk mengumpulkan data meliputi lembar angket analisis kebutuhan, lembar validasi *e-module*, dan lembar angket respon uji kepraktisan dan uji keterbacaan. Data-data yang diperoleh dianalisis secara deskriptif. Hasil penelitian menunjukkan bahwa karakteristik *e-module* IPA mencakup (1) berupa bahan ajar pembelajaran IPA kelas VII semester II kurikulum merdeka yang dikemas dalam bentuk digital (2) disusun secara sistematis berdasarkan sintak model PjBL. (3) disajikan lebih interaktif karena dilengkapi media audio dan visual yang dapat meningkatkan semangat belajar siswa secara mandiri. Tingkat validitas *e-module* IPA berbasis PjBL termasuk dalam kategori sangat valid dengan skor 0,98. Tingkat kepraktisan *e-module* IPA berbasis PjBL termasuk dalam kategori sangat praktis dengan rerata skor 3,83. Tingkat keterbacaan *e-module* IPA berbasis PjBL termasuk dalam kategori terbaca, dengan rerata skor 3,54. Berdasarkan hasil uji validitas, kepraktisan, dan keterbacaan *e-module* IPA berbasis PjBL pada topik ekologi dan keanekaragaman hayati Indonesia untuk siswa SMP ini layak diuji coba lebih lanjut ke tahap selanjutnya yaitu *implementation* (implementasi) dan *evaluation* (evaluasi).

Kata Kunci: *E-module*, PjBL, Ekologi, Keanekaragaman Hayati Indonesia, IPA.

THE DEVELOPMENT OF PROJECT BASED LEARNING SCIENCE E-MODULE ON THE TOPIC OF INDONESIAN ECOLOGY AND BIODIVERSITY FOR JUNIOR HIGH SCHOOL STUDENTS

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ABSTRACT

This study aims to describe the characteristics and analyze the validity, practicality, and readability of project based learning (PjBL) science e-module on the topic of Indonesian ecology and biodiversity for junior high school students. The type of research used is the R&D with ADDIE model consists of Analysis, Design, Development, Implementation, and Evaluation. The stages in the research are limited to the development stage. Testing the validity of the science e-module was tested by two science education experts. The practicality test of the e-module was tested by five science teachers. The science e-module readability test was tested in a limited way by 11 students from 7th grade junior high school. The instruments used to collect data included a needs analysis questionnaire sheet, an e-module validation sheet, and a practicality test and readability test response questionnaire sheet. The data obtained were analyzed descriptively. The results showed that the characteristics of the science e-module included (1) in the form of science learning materials for class VII semester II of the independent curriculum packaged in digital form (2) arranged systematically based on the syntax of the PjBL model. (3) presented more interactively because it is equipped with audio and visual media that can increase student's enthusiasm for learning independently. The validity level of the science e-module is included in the very valid category with a score of 0.98. The practical level of the science e-module is included in the very practical category with an average score of 3.83. The legibility level of the science e-module is included in the legible category, with an average score of 3.54. Based on the results of testing the validity, practicality, and readability of the project based learning science e-module on the topic of Indonesian ecology and biodiversity for junior high school students, it deserves further trials to the next stage, namely implementation and evaluation.

Keywords: *E-module, PjBL, Ecology, Biodiversity Indonesia, Science.*