

ABSTRAK

Agung, I Dewa Gede (2021), Pengembangan E-Modul IPA dengan Model STEM-PjBL Berorientasi Pendidikan Karakter Untuk Meningkatkan Hasil Belajar Siswa. Tesis, Pendidikan IPA, Program Pascasarjana, Universitas Pendidikan Genesha.

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Kata-kata kunci: e-modul, Karakter, STEM-PjBL, hasil belajar

Penelitian ini bertujuan menghasilkan E-Modul IPA dengan Model STEM-PjBL Berorientasi Pendidikan Karakter yang valid, praktis, dan efektif untuk meningkatkan hasil belajar IPA siswa SMP kelas VIII. Jenis penelitian ini adalah penelitian pengembangan (*Research and Development*) dengan menggunakan model pengembangan 4D (*Four-D Models*) yang dikembangkan oleh Sivasailam Thiagarajan, Dorothy Semmel, dan Melvyn Semmel. Model 4D (*Four-D Models*) memiliki empat tahapan meliputi (1) *define* (pendefinisian), (2) *design* (perancangan), (3) *develop* (pengembangan), dan (4) *disseminate* (penyebarluasan), namun pada penelitian ini tahap *disseminate* (penyebarluasan) tidak dapat dilaksanakan karena keterbatasan waktu dan biaya. Data pada penelitian ini dikumpulkan dengan teknik pemberian angket validasi, angket kepraktisan dan tes hasil belajar berbentuk pilihan ganda. Adapun rancangan penelitian untuk uji keefektifan menggunakan *One Group Pretest-Posttest Design*. Data hasil penelitian di analisis dengan analisis validasi *Gregory*, *N-gain score* ternormalisasi dan analisis skor rata-rata. Hasil uji kevalidan menunjukkan bahwa (1) validitas materi e-modul dengan kualifikasi sangat baik ($KVG= 1,00$), (2) validitas media e-modul dengan kualifikasi sangat valid ($\bar{x}=94,72$), dan (3) validitas bahasa e-modul dengan kualifikasi sangat valid ($\bar{x}=100$). Hasil uji kepraktisan menunjukkan bahwa (1) e-modul sangat praktis dari praktisi guru ($\bar{x}=94,99$) dan (2) e-modul sangat praktis dari praktisi siswa ($\bar{x}=94,54$). Hasil uji efektivitas menunjukkan bahwa (1) terjadi peningkatan hasil belajar siswa memperoleh nilai rata-rata *pretest* sebesar 37,91 kategori sangat kurang menjadi nilai *posttest* sebesar 83,73 kategori sangat baik, (2) hasil perhitungan *N-gain* ternormalisasi sebesar 0,74 ($\langle g \rangle = 0,74$) dengan kriteria tinggi. Berdasarkan hasil penelitian tersebut, dapat disimpulkan bahwa (1) e-modul memiliki karakteristik sesuai dengan model pembelajaran *STEM-PjBL*, (2) e-modul telah memperoleh penilaian yang valid dari segi materi, bahasa, dan media, (3) e-modul telah memperoleh penilaian yang praktis dari guru dan siswa, dan (4) e-modul efektif meningkatkan hasil belajar siswa.

ABSTRACT

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The research was aimed to provide a Natural Science E-modul with STEM-PJBL model based on character building which was valid, practicable and effective for increasing natural science education learning result in junior highschool at 8 grade. The type of this research was research and development with 4D (Four-D Models) and it was developed by Sivasailam Thiagarajan, Dorothy Semmel, and Melvyn Semmel. The 4D model has 4 main steps, there was (1) define, (2) design, (3) develop, as well as (4) disseminate, however in disseminate step, the research was not yet available due to limited time and cost. The data on this research was collected with a validity questionnaire, practically questionnaire, and the result in form of multiple choices. Furthermore the design of this research was to examine the effectiveness of one group pretest-posttest design. Then, the result was analyzed using Gegory validation, N-gain score that was normalized with average score analisys. The validity result indicated that (1) the validity of e-modul material qualified as very good (KVG= 1,00), (2) the accuracy of e-modul media validity was (\bar{x} =94,72), and (3) the accuracy of e-modul language validity was (\bar{x} =100). The resuls of practicality stated: (1) the e-modul was practicable for the teacher (\bar{x} =94,99) also (2) this e-modul was practicable as well for the students (\bar{x} =94,54). The efectiveness of this research resulted as (1) there was a significant result in term of student's learnig with average pretest score as 37,91 categorized as lowest, then the posttest result was categorized as very good with 83,73 score. (2) the result of N-gain calculation normalized as 0,74 ($\langle g \rangle = 0,74$) with highest criteria. According to result of the research, it could be concluded that (1) the e-modul has certain characteristis similar to STEM-PjBL model, (2)e-module had got validable assesment based on, materials, language and media, (3) e-module had got practicable assesment from teacher and students, and (4) e-module was effective to increase the result of student's learning.