

ABSTRAK

Penggunaan bahan ajar pada proses pembelajaran memiliki peran penting dalam memaksimalkan hasil belajar yang diharapkan. Kemampuan HOT Literasi sains merupakan salah satu tantangan pada pendidikan hari ini. Penelitian ini memiliki tujuan untuk mengembangkan bahan ajar digital berbasis PjBL terintegrasi P5 dalam meningkatkan HOT Literasi sains. Dari tujuan umum tersebut dihasilkan tujuan khusus yaitu; 1) untuk mengetahui hasil validasi disain dari bahan ajar elektronik berbasis PjBL terintegrasi P5; 2) untuk mengetahui kepraktisan disain dari bahan ajar elektronik berbasis PjBL terintegrasi P5; 3) untuk mengetahui tingkat efektifitas penggunaan dari bahan ajar elektronik berbasis PjBL terintegrasi P5 dalam meningkatkan HOT Literasi Sains; 4) untuk mengetahui HOT Literasi sains berdasarkan gaya belajar mahasiswa; 5) untuk mengetahui interaksi antara bahan ajar elektronik berbasis PjBL terintegrasi P5 dan gaya belajar dalam mempengaruhi HOT Literasi sains. Penelitian ini merupakan penelitian pengembangan dengan pendekatan *Research and Development (R&D)* dengan menggunakan model pengembangan ADDIE (*Analysis, Design, Development, Implimentation, and Evaluation*). Hasil analisis kebutuhan dan analisis dokumen yang diperoleh menunjukkan kebutuhan terhadap pengembangan bahan ajar elektronik berbasis PjBL terintegrasi P5. Kegiatan pada tahap pengembangan terlebih dahulu dilakukan uji coba terbatas di UNIKA Ruteng NTT. Uji coba terbatas yang dilakukan memberikan informasi mengenai respon dosen dalam menngunakan pengembangan bahan ajar. Selanjutnya bahan ajar yang sudah dilakukan ujicoba terbatas dilanjutkan pada tahap validitas. Hasil dari pengembangan yang dilkakukan diperoleh dalam bentuk buku ajar, Lembar Kerja Peserta Didik (LKPD), RPS. Hasil dari pengembangan produk telah dinilai berdasarkan tim ahli. Validitas ahli diperoleh pada kategori *substantial agreement* berdasarkan hasil uji cohen's kappa. Penilaian terhadap kepraktisan berdasarkan respon pengguna bahan ajar diperoleh 43.53% sangat setuju, 42.71% setuju, 13.71 kurang setuju, dan 0% tidak setuju. Penerapan bahan ajar elektronik berbasis PjBL terintegrasi P5 memiliki efektifitas dalam mempengaruhi HOT Literasi dengan hasil uji signifikan sebesar $0,00 < 0,05$. Peningkatan kemampuan Hot literasi sains mahasiswa berdasarkan gaya belajar menggunakan uji N-gain diperoleh gaya belajar visual sebesar 0,440, gaya belajar auditorial sebesar 0,405, dan gaya belajar kinestetik sebesar 0,567 dengan taraf signifikan sebesar $0,00 < 0,05$. Terdapat interaksi kedua bahan ajar dengan gaya belajar mahasiswa dalam mempengaruhi kemampuan Hot literasi sains mahasiswa, dengan perolehan nilai signifikan sebesar $0,042 < 0,05$. Maka dapat disimpulkan bahwa bahan ajar elektronik berbasis PjBL terintegrasi P5 valid, praktis, dan efektif dalam meningkatkan HOT Literasi sain mahasiswa.

Kata Kunci

PjBL, P5, Literasi, HOT, Abad 21, Bahan Ajar

ABSTRACT

The use of teaching materials in the learning process has an important role in maximizing the expected learning outcomes. HOT Science Literacy ability is one of the challenges in today's education. This study aims to develop digital teaching materials based on PjBL integrated P5 in improving HOT Science Literacy. From the general objective, specific objectives are generated, namely; 1) to find out the results of the design validation of electronic teaching materials based on PjBL integrated P5; 2) to find out the practicality of the design of electronic teaching materials based on PjBL integrated P5; 3) to find out the level of effectiveness of the use of electronic teaching materials based on PjBL integrated P5 in improving HOT Science Literacy; 4) to find out HOT Science Literacy based on student learning styles; 5) to find out the interaction between electronic teaching materials based on PjBL integrated P5 and learning styles in influencing HOT Science Literacy. This research is a development research with a Research and Development (R&D) approach using the ADDIE (Analysis, Design, Development, Implimentation, and Evaluation) development model. The results of the needs analysis and document analysis obtained indicate the need for the development of electronic teaching materials based on integrated PjBL P5. Activities at the development stage were first carried out a limited trial at UNIKA Ruteng NTT. The limited trial conducted provided information on the lecturer's response in using the development of teaching materials. Furthermore, the teaching materials that had been tested limitedly were continued to the validity stage. The results of the development carried out were obtained in the form of textbooks, Student Worksheets (LKPD), RPS. The results of product development have been assessed based on a team of experts. Expert validity was obtained in the substantial agreement category based on the results of the Cohen's Kappa test. The assessment of practicality based on the response of teaching material users obtained 43.53% strongly agree, 42.71% agree, 13.71 less agree, and 0% disagree. The application of electronic teaching materials based on integrated PjBL P5 has an effectiveness in influencing HOT Literacy with a significant test result of $0.00 < 0.05$. The improvement of students' Hot scientific literacy abilities based on learning styles using the N-gain test obtained a visual learning style of 0.440, an auditory learning style of 0.405, and a kinesthetic learning style of 0.567 with a significant level of $0.00 < 0.05$. There is an interaction between the two teaching materials and students' learning styles in influencing students' Hot scientific literacy abilities, with a significant value of $0.042 < 0.05$. It can be concluded that electronic teaching materials based on integrated PjBL P5 are valid, practical, and effective in improving students' HOT scientific literacy.

Keywords

PjBL, P5, Literacy, HOT, 21st Century, Teaching Materials