ABSTRAK

Nurfadillah Syam Nasution, NIM 4202431007 (2024) . Pengembangan *E-Modul* Kimia Berbasis *Problem Based Learning* (PBL) Pada Materi Sistem Koloid

Penelitian ini bertujuan untuk mendeskripsi: (1) Pengembangan dan kelayakan *e-modul* berbasis *Problem Based Learning* (PBL) pada materi sistem koloid ditinjau berdasarkan BSNP; (2) Peningkatan hasil belajar siswa dengan penggunaan *e-modul* berbasis *Problem Based Learning* (PBL) pada materi sistem koloid; (3) Respon siswa terhadap *e-modul* berbasis *Problem Based Learning* (PBL) pada materi sistem koloid yang dikembangkan. Model pengembangan yang digunakan adalah Model ADDIE yang terdiri dari 5 langkah antara lain: *Analysis* (menganalisis); *Design* (merancang); *Development* (mengembangkan); *Implementation* (implementasi); *Evaluation* (evaluasi). Instrumen yang digunakan berupa lembar wawancara, lembar validasi *e-modul*, lembar angket respon siswa, dan instrumen test soal sebanyak 20 butir. Media yang divalidasi oleh validator berdasarkan kriteria Badan Nasional Standar Pendidikan (BNSP), meliputi kelayakan isi, penyajian, bahasa, dan kegrafikan. Setelah divalidasi *e-modul* ini di uji cobakan kepada siswa kelas XI MIA 8 MAN 1 Medan Tahun Pelajaran 2023/2024 dengan jumlah siswa sebanyak 36 orang. Hasil penelitian menunjukkan bahwa (1) *E-modul* berbasis *Problem Based Learning* (PBL) pada materi sistem koloid dinyatakan valid/layak dengan persentase rata-rata 91,6%; (2) Adanya peningkatan hasil belajar siswa terhadap penggunaan *e-modul* berbasis *Problem Based Learning* (PBL) pada materi sistem koloid, terlihat dari uji *N-Gain* sebesar 0,76 dengan kategori tinggi; (4) Respon siswa terhadap *e-modul* yang dikembangkan, dikategorikan sangat baik dengan persentase rata-rata 87%. Pengembangan *e-modul* kimia berbasis *Problem Based Learning (PBL)* dapat dibuat dengan menggunakan materi yang lain, sehingga dapat meningkatkan pemahaman siswa terhadap pembelajaran kimia.

Kata Kunci : *E-modul, Problem Based Learning* (PBL), Sistem Koloid, Hasil Belajar dan Respon Siswa

ABSTRACT

Nurfadillah Syam Nasution, NIM 4202431007 (2024) . Development E-Module Based Chemistry Problem Based Learning (PBL) In Colloidal System Materials

This research aims to describe: (1) Development and feasibility e-module based Problem Based Learning (PBL) on colloid system materials reviewed based on BSNP; (2) Increasing student learning outcomes with usee-module based Problem Based Learning (PBL) in colloid system materials; (3) Student response toe-module based Problem Based Learning (PBL) on the developed colloid system material. The development model used is the ADDIE Model which consists of 5 steps, including: Analysis (analyze); Design (design); Development (develop); Implementation (implementation); Evaluation (evaluation). The instruments used are interview sheets, validation sheetse-module, a student response questionnaire sheet, and a 20-item test instrument. Media validated by validators is based on the criteria of the National Education Standards Agency (BNSP), including appropriateness of content, presentation, language and graphics. After validatione-moduleThis was tested on class XI MIA 8 MAN 1 Medan students for the 2023/2024 academic year with a total of 36 students. The research results show that (1)E-module based Problem Based Learning (PBL) on colloid system material was declared valid/feasible with an average percentage of 91.6%; (2) There is an increase in student learning outcomes regarding usee-module basedProblem Based Learning(PBL) in colloid system material, visible from the testN-Gain amounting to 0.76 in the high category; (4) Student response toemodulethose developed are categorized as very good with an average percentage of 87%. Development e-module based chemistry Problem Based Learning (PBL) can be made using other materials, so that it can increase students' understanding of chemistry learning.

Keyword : E-module, Problem Based Learning(PBL), Colloid Systems, Learning Outcomes and Student Responses