

ABSTRAK

Siti Khodijah Dalimunthe: **Pengembangan E-modul Berbasis Masalah Menggunakan Aplikasi Moodle Materi Kimia Siswa SMA/MA Kelas XI Semester II**. Tesis. Medan: Program Studi Pendidikan Kimia, Pascasarjana Universitas Negeri Medan, 2022.

Penelitian ini bertujuan untuk mengetahui (1) analisis kebutuhan pengembangan e-modul berbasis masalah menggunakan aplikasi *moodle* (2) kelayakan e-modul yang dikembangkan (3) hasil belajar lebih tinggi dari nilai KKM (4) mengetahui peningkatan hasil belajar siswa (5) motivasi belajar siswa (6) korelasi positif dan signifikan antara motivasi dengan hasil belajar (7) respon siswa. Penelitian ini menggunakan pendekatan *Research and Development* (R&D) dengan menggunakan model pengembangan ADDIE (*Analysis, Design, Development, Implementation, and Evaluation*). E-modul yang dikembangkan diimplementasikan pada siswa SMA kelas XI yang berjumlah 30 orang siswa. Instrumen angket digunakan untuk mengetahui kelayakan e-modul, motivasi dan respon siswa, instrumen test untuk mengetahui hasil belajar. Data dianalisis secara deskriptif dan statistik inferensial *uji one sample t-test* dan uji korelasi. Hasil penelitian diperoleh bahwa (1) dibutuhkannya e-modul berbasis masalah menggunakan aplikasi *moodle* yang dapat digunakan melalui android/Hp dan juga laptop/Pc yang penggunaannya dengan tidak dibatasi ruang dan waktu. (2) Hasil pengembangan e-modul telah layak digunakan berdasarkan Badan Standar Nasional Pendidikan (BSNP) dengan perolehan rata-rata kelayakan materi 3,84 dan kelayakan media elektronik 3,85. (3) Hasil belajar siswa yang dibelajarkan dengan e-modul berbasis masalah dengan aplikasi *moodle* lebih tinggi dari nilai KKM yaitu 75 dengan rata-rata *posttest* siswa 85 secara signifikan (nilai sig. = 0,000 < 0,05). (4) Peningkatan hasil belajar siswa setelah menggunakan e-modul berbasis masalah menggunakan aplikasi *moodle* mencapai kriteria N-Gain tinggi (0,8). (5) Rata-rata motivasi belajar siswa setelah menggunakan e-modul sangat termotivasi (87%). (6) Motivasi memiliki hubungan dengan hasil belajar ($r = 0,884$) secara positif dan signifikan dengan 78% sumbangan motivasi terhadap hasil belajar. (7) Respon siswa terhadap penggunaan e-modul sangat baik dengan nilai rata-rata persentase jawaban siswa sebesar 86,45%.

Kata Kunci : E-Modul Kimia, *Moodle*, *Research and Development* (R&D), Hasil Belajar, Motivasi.

ABSTRACT

Siti Khodijah Dalimunthe: **Problem-Based E-Module Development Using the Moodle Chemistry Application for SMA/MA Class XI Semester II Students**. Thesis. Medan: Chemistry Education Study Program, Postgraduate Program, State University of Medan, 2022

This study aims to determine (1) problem-based analysis of the needs of e-module development using the Moodle application (2) the feasibility of the developed e-module (3) learning outcomes higher than the KKM score (4) knowing the increase in student learning outcomes (5) motivation student learning (6) positive and significant correlation between motivation and learning outcomes (7) student responses. This study uses a Research and Development (R&D) approach using the ADDIE development model (Analysis, Design, Development, Implementation, and Evaluation). The e-module that was developed was implemented in class XI high school students, totaling 30 students. The questionnaire instrument is used to determine the feasibility of the e-module, student motivation and response, the test instrument is to determine learning outcomes. Data were analyzed descriptively and inferential statistics using one sample t-test and correlation test. The results of the study showed that (1) a problem-based e-module is needed using the Moodle application which can be used via Android/mobile phones and also laptops/PCs whose use is not limited by space and time. (2) The results of e-module development have been appropriate for use based on the National Education Standards Agency (BSNP) with an average acquisition of 3.84 for eligibility material and 3.85 for eligibility for electronic media. (3) The learning outcomes of students who are taught with problem-based e-modules with the Moodle application are significantly higher than the KKM score, namely 75 with an average student posttest of 85 significantly (sig. value = 0.000 < 0.05). (4) The increase in student learning outcomes after using problem-based e-modules using the Moodle application reaches high N-Gain criteria (0.8). (5) The average student motivation after using the e-module is highly motivated (87%). (6) Motivation has a positive and significant relationship with learning outcomes ($r = 0.884$) with 78% of motivation's contribution to learning outcomes. (7) Student response to the use of e-modules is very good with an average percentage of student answers of 86.45%.

Keywords: Chemistry E-Module, Moodle, Research and Development (R&D), Learning Outcomes, Motivation.