

ABSTRAK

Kasandra Louisa Tambunan, NIM. 4201131029 (2024), Pengembangan E-Modul Kimia Berbasis Model Pembelajaran *Problem Based Learning* pada Materi Laju Reaksi.

Penelitian ini bertujuan untuk mengembangkan dan mengetahui kevalidan dan kepraktisan e-modul berbasis *problem based learning* pada materi laju reaksi serta melihat respon siswa. Penelitian ini menggunakan metode penelitian dan pengembangan atau Research and Development (R&D) model 4D dimulai dari tahap pendefinisian, perancangan, pengembangan, dan penyebaran. Penelitian ini dibatasi sampai tahap pengembangan. Instrumen yang digunakan berupa angket validasi serta angket respon guru dan siswa. Penilaian validasi melibatkan lima validator ahli meliputi dua validator ahli media dan tiga validator ahli materi. Uji praktikalitas diberikan kepada satu guru kimia SMAN 1 Percut Sei Tuan serta uji coba skala kecil dilakukan kepada 32 siswa kelas XI Matlansos. Penilaian ahli media sebesar 87,8% yang memenuhi kriteria sangat valid serta penilaian ahli materi sebesar 80,5% dengan kriteria sangat valid. Oleh karena itu, e-modul laju menggunakan model *problem based learning* valid digunakan dalam proses pembelajaran. Uji praktikalitas guru dilakukan dan didapatkan hasil sebesar 98% yang memenuhi kriteria sangat praktis. Hasil dari respon siswa terhadap e-modul sebesar 82,9% dengan kriteria sangat setuju. Didapatkan kesimpulan bahwa E-Modul Kimia Berbasis Model Pembelajaran *Problem Based Learning* pada Materi Laju Reaksi sudah valid, praktis dan dapat dijadikan bahan ajar di sekolah.

Kata Kunci : E-Modul; Laju Reaksi; Problem Based Learning

ABSTRACT

Kasandra Louisa Tambunan, NIM. 4201131029 (2024), Development of a Chemistry E-Module Based on a Problem Based Learning Model on Reaction Rate Material.

This research aims to develop and determine the validity and practicality of e-modules based on problem based learning on reaction rate material and see student responses. This research uses the research and development method or Research and Development (R&D) 4D model starting from the definition, design, development and distribution stages. This research is limited to the development stage. The instruments used were validation questionnaires and teacher and student response questionnaires. The validation assessment involved five expert validators including two media expert validators and three material expert validators. The practicality test was given to a chemistry teacher at SMAN 1 Percut Sei Tuan and a small-scale trial was carried out on 32 class XI Matlansos students. The media expert assessment was 87.8% which met the very valid criteria and the material expert assessment was 80.5% with the very valid criteria. Therefore, the rate e-module using the problem based learning model is valid for use in the learning process. The teacher practicality test was carried out and obtained a result of 98% which met the very practical criteria. The results of student responses to the e-module were 82.9% with the criteria of strongly agreeing. It was concluded that the Chemistry E-Module based on the Problem Based Learning Model on Reaction Rate Material was valid, practical and could be used as teaching material in schools.

Keywords: E-Module; Reaction rate; Problem Based Learning