

ABSTRACT

Citra Sianturi (2025). Development of E-Module Teaching Material Based on Project Based Learning (PjBL) Integrated With Ethnopedagogy on Reaction Rate

This study aimed to analyze the initial needs for developing an e-module based on Project-Based Learning (PjBL) integrated with ethnopedagogy on reaction rates, determine the e-module's feasibility based on the National Education Standards Agency (BSNP) standards, and assess teacher and student responses to the developed e-module. This research is a study that reaches the limited testing stage, namely the responses of teachers and students. This study employed a Research and Development (R&D) method with a 4-D development model encompassing the define, design, develop, and disseminate stages. The needs analysis results indicated that teachers strongly agreed with the development of an e-module based on PjBL integrated with ethnopedagogy. A student questionnaire revealed that 85.5% of students were interested and agreed that learning should be developed in the form of a project-based e-module integrated with local wisdom because it could facilitate independent learning. This study was conducted at SMA Negeri 2 Percut Sei Tuan with 35 students in grades XI-C. Validation results by three Chemistry Education lecturers at UNIMED using the BSNP instrument showed that the material feasibility averaged 88.1% and the media feasibility averaged 86.8%, both of which met the very feasibility criteria. Validation by three chemistry teachers at the research site showed a material feasibility score of 96.6% and a media feasibility score of 94.3%, categorized as very feasible. Six chemistry teachers outside the research site responded with a 94.6% response rate, categorized as very good. Student response at the research site was 89.7%, while student response at SMA Negeri 1 Raya was 89.9%, both categorized as very good. Therefore, the developed e-module is deemed feasible and can be used in chemistry learning. Integrating local wisdom into the Project-Based Learning (PjBL) framework has a positive effect on students engagement in learning.

Keywords: e-module development, reaction rate, Project Based Learning, ethnopedagogy, local wisdom, BSNP