PENGEMBANGAN E-MODUL BERBASIS TIGA LEVEL REPRESENTASI KIMIA PADA MATERI LARUTAN ELEKTROLIT DAN NONELEKTROLIT

Oleh
Riskayanti Tamba, NIM 1813031018
Program Studi Pendidikan Kimia
Jurusan Kimia

ABSTRAK

Penelitian ini bertujuan untuk mendeskripsikan dan menjelaskan karakteristik, validitas, keterbacaan, dan kepraktisan dari e-modul berbasis tiga level representasi kimia pada materi larutan elektrolit dan nonelektrolit yang dikembangkan. Penelitian dan pengembangan (R&D) yang dilakukan menggunakan model ADDIE yang dibatasi pada tahap analisis, desain, dan pengembangan. Instrumen penelitian yang digunakan adalah lembar analisis dokumen, lembar validasi, lembar keterbacaan, dan lembar kepraktisan. Karakteristik e-modul yang dikembangkan adalah mengintegrasikan pengetahuan tiga level representasi kimia yaitu aspek makroskopik, submikroskopik dan simbolik. Uji validitas komponen validasi media dan isi menghasilkan skor masing-masing sebesar 3,63 dengan kategori sangat valid dan 3,45 dengan kategori valid. Nilai rata-rata tes keterbacaan pada kategori baik sebesar 3,06. Ujian kepraktisan guru dan siswa masing-masing menghasilkan nilai 3,35 dan 3,04, dengan kedua kelompok mendapat kategori kepraktisan tertinggi. Hasil uji produk menunjukkan bahwa e-modul berbasis tiga level representasi kimia pada materi larutan elektrolit dan nonelektrolit layak digunakan sebagai alternatif dalam proses pembelajaran.

Kata kunci: e-modul, tiga level representasi kimia, larutan elektrolit dan nonelektrolit

DEVELOPMENT OF AN E-MODULE BASED ON THREE LEVELS OF CHEMISTRY REPRESENTATION IN ELECTROLYTE AND NONELECTROLYTE SOLUTION MATERIALS

By
Riskayanti Tamba, NIM 1813031018
Chemistry Education Study Program
Department of Chemistry

ABSTRACT

This research aims to describe and explain the characteristics, validity, readability, and practicality of the e-module based on the three levels of chemical representation in electrolyte and non-electrolyte solution material that was developed. Research and development (R&D) carried out using the ADDIE model is limited to the analysis, design, and development stages. The research instruments used were document analysis sheets, validation sheets, readability sheets, and practicality sheets. The characteristic of the e-module developed is that it integrates knowledge of three levels of chemical representation, namely macroscopic, submicroscopic, and symbolic aspects. The validity tests carried out included content and media validation which respectively produced scores of 3.45 in the valid category and 3.63 in the very valid category. The readability test produced an average rating of 3.06 in the good category. Practicality tests by teachers and students produced scores of 3.35 and 3.04 with the categories obtained by both being practical. The product test results show that the e-module based on three levels of chemical representation in electrolyte and non-electrolyte solutions is suitable for use as an alternative in the learning process.

Keywords: e-module, three levels of chemical representation, electrolyte and nonelectrolyte solutions