

ABSTRAK

FIRDATUL MIRANDA: Pengembangan E-Modul Berbasis Model Pembelajaran *Inquiry Based Learning* Berbantuan Aplikasi *Heyzine* Terhadap Kemampuan Komunikasi Matematis Siswa. **Program Studi Pendidikan Matematika FKIP Universitas Malikussaleh, 2025**

Penelitian bertujuan untuk mengembangkan, mendeskripsikan kevalidan, kepraktisan, dan keefektifan. Metode yang digunakan dalam penelitian ini adalah R&D dengan menggunakan model ADDIE yang terdiri dari tahap analisis, perancangan, pengembangan, implementasi, dan evaluasi. Subjek penelitian ini adalah peserta didik kelas VIII SMP Negeri 3 Lhokseumawe yang berjumlah 20 orang. Kelayakan e-modul pembelajaran merujuk pada hasil penilaian e-modul oleh para ahli media dan ahli materi, serta uji coba siswa kelompok kecil. Kelayakan terlihat dari hasil penilaian produk oleh ahli media sebesar 98,09% dengan kategori “sangat layak”, hasil persentase penilaian produk oleh ahli materi sebesar 95,4% dengan kategori “sangat valid”, dan hasil penilaian produk oleh 9 siswa kelompok kecil sebesar 92,66% dengan kategori “sangat praktis”. Berdasarkan hasil penilaian produk oleh semua penilaian produk oleh semua validator yang menyatakan layak maka e-modul pembelajaran matematika yang dikembangkan sudah memenuhi kriteria layak digunakan untuk peserta didik kelas VIII SMP Negeri 3 Lhokseumawe. Kepraktisan penggunaan produk dinilai dari angket respon peserta didik dengan hasil angket respon peserta didik diperoleh persentase 92,6% dengan kriteria “sangat praktis”. Hasil penilaian observer yang menilai aktivitas guru dengan rata-rata 92,38% dan aktivitas siswa dengan rata-rata 92,72%. Keefektifan penggunaan produk terlihat dari 20 peserta didik dengan hasil ketuntasan belajar peserta didik melalui instrumen tes. Hasil peserta didik yang tuntas yaitu 16 orang dari 20 peserta didik yang tidak tuntas. Produk yang dihasilkan efektif dalam soal kemampuan komunikasi matematis siswa peserta didik kelas VIII SMP Negeri 3 Lhokseumawe, terbukti nilai persentase sebesar 85% dengan kriteria “sangat efektif”. Berdasarkan hasil penelitian dan pengembangan terlihat produk e-modul berbasis model pembelajaran *inquiry based learning* berbantuan aplikasi *heyzine* terhadap kemampuan komunikasi matematis siswa yang dikembangkan pada materi statistika sangat layak dan sangat efektif digunakan dalam proses pembelajaran matematika tingkat SMP/MTSN.

Kata kunci: E-modul, Model *Inquiry Based Learning*, Kemampuan Komunikasi Matematis, *Heyzine*.

ABSTRAK

FIRDATUL MIRANDA: *Development of an E-Module Based on the Inquiry Based Learning Model Assisted by the Heyzine Application on Students' Mathematical Communication Abilities. Malikussaleh University FKIP Mathematics Education Study Program, 2025.*

The research aims to develop, describe validity, practicality and effectiveness. The method used in this research is R&D using the ADDIE model which consists of analysis, design, development, implementation and evaluation stages. The subjects of this research were 20 students in class VIII of SMP Negeri 3 Lhokseumawe. The feasibility of learning e-modules refers to the results of e-module assessments by media experts and material experts, as well as small group student trials. Feasibility can be seen from the results of the product assessment by media experts of 98.09% in the "very feasible" category, the percentage results of product assessments by material experts of 95.4% in the "very valid" category, and the results of the product assessment by 9 small group students of 92.66% in the "very practical" category. Based on the results of product assessments by all product assessments by all validators who stated that they were feasible, the mathematics learning e-module that was developed met the criteria for being suitable for use for class VIII students at SMP Negeri 3 Lhokseumawe. The practicality of using the product was assessed from the student response questionnaire with the results of the student response questionnaire obtaining a percentage of 92.6% with the criteria 'very practical'. The observer's assessment results assessed teacher activity with an average of 92.38% and student activity with an average of 92.72%. The effectiveness of product use was seen from 20 students with the results of students' learning completion through test instruments. The results of students who completed were 17 people from 3 students who did not complete. The resulting product is effective in matters of mathematical communication skills for class VIII students at SMP Negeri 3 Lhokseumawe, proven to have a percentage value of 85% with the criteria "very effective". Based on the results of research and development, it can be seen that the e-module product based on the inquiry-based learning model assisted by the Heyzine application for students' mathematical communication skills developed on statistics material is very feasible and very effective for use in the mathematics learning process at the junior high school/MTSN level.

Keywords: *E-module, Inquiry based learning model, Mathematical Communication Skills, Heyzine.*