

ABSTRAK

Adinda Sih Pinasthi Setya Utami. 2026. Pengembangan E-Modul Interaktif Berbasis RME (*Realistic Mathematics Education*) guna Meningkatkan Prestasi Belajar Siswa SMP Negeri 4 Pandak Bantul. Skripsi. Program Studi Pendidikan Matematika, FKIP, Universitas PGRI Madiun. Pembimbing (I) Dr. Sanusi, M.Pd. (II) Dr. Restu Lusiana, M.Pd.

Perkembangan teknologi mendorong transformasi pembelajaran melalui pemanfaatan media digital yang relevan dengan kebutuhan pembelajaran abad ke- 21. Penelitian ini bertujuan untuk mengembangkan e-Modul Interaktif berbasis *Realistic Mathematics Education* (RME) yang memenuhi kriteria valid, praktis, dan efektif untuk meningkatkan prestasi belajar siswa pada materi barisan dan deret aritmetika di SMP Negeri 4 Pandak Bantul. Penelitian ini merupakan penelitian pengembangan (*Research and Development*) menggunakan model ADDIE (*Analysis, Design, Development, Implementation, dan Evaluation*). Subjek penelitian terdiri atas 10 siswa kelas VIII A sebagai uji coba terbatas dan 32 siswa kelas VIII B sebagai uji coba lapangan. Teknik pengumpulan data menggunakan wawancara, angket, dan tes, sedangkan teknik analisis data menggunakan analisis deskriptif kuantitatif, N-Gain, dan uji *Wilcoxon Signed Rank Test*. Hasil penelitian menunjukkan bahwa e-Modul Interaktif yang dikembangkan memenuhi kriteria sangat valid dengan persentase penilaian ahli materi sebesar 88, 2% dan ahli media sebesar 86,7%, memenuhi kriteria sangat praktis dengan persentase 81%, serta memenuhi kriteria cukup efektif dengan nilai N-Gain sebesar 63%. Hasil uji *Wilcoxon Signed Rank Test* memperoleh nilai signifikansi $0,000 < 0,05$, sehingga terdapat peningkatan prestasi belajar siswa setelah menggunakan e-Modul Interaktif berbasis RME. Berdasarkan hasil tersebut, e-Modul Interaktif berbasis RME dinyatakan valid, praktis, dan efektif sehingga layak digunakan dalam pembelajaran matematika.

Kata kunci: E-Modul Interaktif, *Realistic Mathematics Education* (RME), Prestasi Belajar.

ABSTRACT

Adinda Sih Pinasthi Setya Utami. 2026. *Development of Interactive E-Modules Based on RME (Realistic Mathematics Education) to Improve the Academic Achievement of Students at SMP Negeri 4 Pandak Bantul*. Thesis. Mathematics Education Program, FKIP, PGRI University of Madiun. Advisors: (I) Dr. Sanusi, M.Pd. (II) Dr. Restu Lusiana, M.Pd.

Technological advancements are driving a transformation in learning through the use of digital media relevant to 21st-century learning needs. This study aims to develop an interactive e-module based on Realistic Mathematics Education (RME) that meets the criteria of validity, practicality, and effectiveness to improve students' academic achievement in arithmetic sequences and series at SMP Negeri 4 Pandak Bantul. This study is a research and development (R&D) study using the ADDIE model (Analysis, Design, Development, Implementation, and Evaluation). The research subjects consisted of 10 eighth-grade A students as a pilot study group and 32 eighth-grade B students as a field test group. Data collection techniques included interviews, questionnaires, and tests, while data analysis techniques included quantitative descriptive analysis, N-Gain, and the Wilcoxon Signed-Rank Test. The research results show that the Interactive e-Module developed meets the criteria for high validity, with a rating of 88.2% from subject matter experts and 86.7% from media experts; meets the criteria for high practicality, with a rating of 81%; and meets the criteria for moderate effectiveness, with an N-Gain score of 63%. The results of the Wilcoxon Signed-Rank Test yielded a significance value of $0.000 < 0.05$, indicating that there was an improvement in student learning achievement after using the RME-based Interactive e-Module. Based on these results, the RME-based Interactive e-Module was found to be valid, practical, and effective, and is therefore suitable for use in mathematics instruction.

Keywords: Interactive E-Module, Realistic Mathematics Education (RME), Academic Achievement.