

ABSTRAK

TRY RAHAYU. Pengembangan E-modul Interaktif Berbasis *Problem Based Learning* untuk Meningkatkan Berpikir Kritis Siswa Kelas 4 pada Mata Pelajaran Matematika di SDN 060866 Medan. Skripsi. Medan: Fakultas Ilmu Pendidikan. Universitas Negeri Medan. 2026.

Penelitian ini dilatarbelakangi oleh rendahnya kemampuan berpikir kritis dan hasil belajar siswa pada pembelajaran matematika, serta belum tersedianya media pembelajaran interaktif yang mendukung proses pembelajaran. Penelitian ini bertujuan untuk mengembangkan e-modul interaktif berbasis *Problem Based Learning* (PBL) yang layak, praktis, dan efektif untuk meningkatkan kemampuan berpikir kritis siswa kelas IV SDN 060866 Medan. Penelitian ini menggunakan metode *Research and Development* (R&D) dengan model pengembangan ADDIE yang terdiri dari tahap *Analysis, Design, Development, Implementation, dan Evaluation*. Subjek penelitian terdiri dari ahli materi, ahli desain, ahli soal, guru, dan siswa kelas IV B yang berjumlah 23 orang. Teknik pengumpulan data menggunakan observasi, wawancara, angket, dan tes (*pre-test* dan *post-test*). Hasil penelitian menunjukkan bahwa e-modul yang dikembangkan dinyatakan sangat layak dengan hasil validasi ahli materi sebesar 87,69%, ahli desain sebesar 95,65%, dan ahli soal sebesar 84,61%. E-modul juga dinyatakan sangat praktis dengan hasil angket respon guru sebesar 98,6%. Selain itu, e-modul terbukti sangat efektif dengan peningkatan hasil belajar siswa, ditunjukkan dari rata-rata nilai *pre-test* sebesar 53,75 menjadi 87,75 pada *post-test* serta ketuntasan belajar mencapai 91%. Dengan demikian, e-modul interaktif berbasis *Problem Based Learning* efektif digunakan untuk meningkatkan kemampuan berpikir kritis siswa pada pembelajaran matematika.

Kata Kunci : E-Modul Interaktif, *Problem Based Learning*, Berpikir Kritis, Matematika

ABSTRACT

TRY RAHAYU. Development of an Interactive E-Module Based on Problem Based Learning to Improve Fourth Grade Students' Critical Thinking Skills in Mathematics at SDN 060866 Medan. Skripsi. Medan: Faculty of Education. State University of Medan. 2026.

This research was motivated by the low level of students' critical thinking skills and learning outcomes in mathematics, as well as the lack of interactive learning media to support the learning process. This study aimed to develop an interactive e-module based on Problem Based Learning (PBL) that is valid, practical, and effective in improving the critical thinking skills of fourth-grade students at SDN 060866 Medan. This research employed the Research and Development (R&D) method using the ADDIE development model, which consists of Analysis, Design, Development, Implementation, and Evaluation stages. The research subjects included material experts, design experts, assessment experts, teachers, and 23 students of class IV B. Data collection techniques were carried out through observation, interviews, questionnaires, and tests (pre-test and post-test). The results showed that the developed e-module was categorized as very valid, with validation scores of 87.69% from material experts, 95.65% from design experts, and 84.61% from assessment experts. The e-module was also considered very practical, with a teacher response questionnaire score of 98.6%. In addition, the e-module proved to be highly effective in improving student learning outcomes, as indicated by an increase in the average pre-test score from 53.75 to 87.75 in the post-test, with a learning completeness rate reaching 91%. Therefore, the interactive e-module based on Problem Based Learning is effective in enhancing students' critical thinking skills in mathematics learning.

Keywords : Interactive E-Module, Problem Based Learning, Critical Thinking, Mathematics