

ABSTRAK

**PENGEMBANGAN *E-MODUL* MATEMATIKA *BERBASIS DISCOVERY*
LEARNING BERBANTUAN *SOFTWARE FLIPBOOK* UNTUK
MENINGKATKAN PEMAHAMAN KONSEP MATEMATIS
PADA MATERI PELUANG KELAS VIII SMP**

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Dalam penelitian ini bertujuan untuk: (1) Mendeskripsikan peningkatan kemampuan pemahaman konsep matematis peserta didik yang diberi pembelajaran menggunakan *e-modul* berbasis *discovery learning*. (2) Menemukan *e-modul* berbasis *discovery learning* yang efektif terhadap pemahaman konsep matematis peserta didik. Penelitian ini merupakan jenis penelitian *Research and Development* (R&D) yang menggunakan model ADDIE. Yang terdiri dari 5 tahap yaitu *Analysis* (Analisis), *Design* (Perancangan), *Development* (Pengembangan), *Implementation* (Implementasi), dan *Evaluation* (Evaluasi). Instrumen penelitian yang digunakan adalah lembar validasi dengan teknik pengumpulan data menggunakan skala *Likert* serta angket respon peserta didik menggunakan skala *Likert*. Objek penelitian berupa bahan ajar *e-modul* matematika berbantuan *flipbook maker* pada materi peluang kelas VIII SMP Swasta Swadaya Sumberejo. Subjek uji coba dilakukan di kelas VIII-1 dengan jumlah 22 orang dan kelas VIII-2 dengan jumlah 22 orang. *E-modul* divalidasi oleh 4 validator yang terdiri dari tiga dosen dan satu guru matematika SMP Swasta Swadaya Sumberejo. Data validasi dan data kepraktisan dianalisis dengan cara menentukan rata-rata dari setiap penilaian. Hasil penelitian menunjukkan bahwa (1) hasil persentasi validasi ahli media sebesar 90%, ahli materi sebesar 87%, ahli bahasa sebesar 88% dengan kriteria sangat valid; (2) Hasil uji kepraktisan berdasarkan penilaian angket respon peserta didik diperoleh rata-rata 81,1% dengan kriteria sangat praktis. (3) Keefektifan terhadap kemampuan pemahaman konsep matematis peserta didik dari perolehan nilai *N-gain* pada uji coba I sebesar 0,4 dan uji coba II sebesar 0,8, maka terjadi peningkatan sebesar 0,4. Dengan demikian, dapat disimpulkan bahwa bahan ajar *e-modul* matematika berbasis *discovery learning* berbantuan *flipbook maker* pada materi peluang kelas VIII SMP teruji kevalidan, kepraktisan dan keefektifannya.

Kata Kunci : *E-Modul*, *Discovery Learning*, *Flipbook Maker*, Pemahaman Konsep matematis

ABSTRACT
DEVELOPMENT OF MATHEMATICS E-MODULES BASED ON
DISCOVERY LEARNING ASSISTED BY FLIPBOOK SOFTWARE
TO IMPROVE UNDERSTANDING OF MATHEMATICS
CONCEPTS IN CLASS VIII JUNIOR HIGH
SCHOOL MATERIALS

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This study aims to: (1) describe the increase in the ability to understand mathematical concepts of students who are given learning using discovery learning-based e-modules. (2) Finding an e-module based on discovery learning that is effective in understanding students' mathematical concepts. This research is a type of Research and Development (R&D) research that uses the ADDIE model. Which consists of 5 stages, namely Analysis (Analysis), Design (Design), Development (Development), Implementation (Implementation), and Evaluation (Evaluation). The research instrument used was a validation sheet with data collection techniques using a Likert scale and student response questionnaires using a Likert scale. The object of this research is a mathematics e-module teaching material assisted by a flipbook maker on the opportunity material for class VIII of Sumberejo Private Junior High School. The trial subjects were carried out in class VIII-1 with a total of 22 people and class VIII-2 with a total of 22 people. The e-module was validated by 4 validators consisting of three lecturers and one mathematics teacher at the Sumberejo Private Junior High School. Validation data and practicality data were analyzed by determining the average of each assessment. The results showed that (1) the percentage of media expert validation was 90%, material expert was 87%, linguist was 88% with very valid criteria; (2) The results of the practicality test based on the assessment of the student response questionnaires obtained an average of 81.1% with very practical criteria. (3) The effectiveness of the ability to understand mathematical concepts of students from the acquisition of the N-gain value in the first trial was 0.4 and the second trial was 0.8, then there was an increase of 0.4. Thus, it can be concluded that the discovery learning-based mathematics e-module teaching materials assisted by a flipbook maker in the class VIII SMP opportunity material have been tested for validity, practicality and effectiveness.

Keywords: *E-Module, Discovery Learning, Flipbook Maker, Understanding Mathematical Concepts*