

ABSTRAK

PENGEMBANGAN MULTIMEDIA INTERAKTIF MENGGUNAKAN MODEL *DISCOVERY LEARNING* UNTUK MENINGKATKAN KEMAMPUAN REPRESENTASI MATEMATIS SISWA

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Penelitian pengembangan multimedia interaktif ini bertujuan sebagai media pembelajaran yang dapat meningkatkan kemampuan representasi matematis siswa secara visual, simbolik, dan verbal, pada materi Statistika Kelas VIII SMP/MTs/Sederajat. Multimedia interaktif ini dikembangkan dengan menggunakan model *discovery learning* yang terdiri dari tahapan *stimulation*, *problem statement*, *collection*, *processing*, *verification*, dan *generalization*. Permasalahan yang melatarbelakangi penelitian pengembangan ini adalah rendahnya kemampuan representasi matematis siswa kelas VIII SMP Al-Huda Jatiagung. Penelitian ini menggunakan metode *Research and Development* (R&D) dengan model pengembangan ADDIE (*Analysis, Design, Development, Implementation, Evaluation*). Rancangan penelitian menggunakan *pretest-posttest experimental control group design*. Teknik pengumpulan data meliputi wawancara, observasi, angket, dan tes kemampuan representasi matematis. Berdasarkan analisis kevalidan, multimedia interaktif memenuhi kriteria valid dari penilaian ahli materi dan ahli media. Berdasarkan analisis kepraktisan, multimedia interaktif memenuhi kriteria praktis dari skor respons siswa dan respons guru. Berdasarkan analisis keefektifan, multimedia interaktif efektif dapat meningkatkan kemampuan representasi matematis siswa berdasarkan hasil uji *t* dan uji proporsi. Dengan demikian, multimedia interaktif menggunakan model *discovery learning* ini memenuhi kriteria valid dan praktis, serta efektif meningkatkan kemampuan representasi matematis siswa.

Kata Kunci: **Multimedia Interaktif, *Discovery Learning*, Representasi Matematis.**

ABSTRACT

INTERACTIVE MULTIMEDIA DEVELOPMENT USING MODEL DISCOVERY LEARNING TO ENHANCING STUDENTS' MATHEMATICAL REPRESENTATION ABILITY

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This interactive multimedia development research aims to be a learning media that can improve students' mathematical representation ability visually, symbolically, and verbally, in Statistics material for Class VIII Junior High School. This interactive multimedia was developed using a model discovery learning consisting of stages of stimulation, problem statement, collection, processing, verification, and generalization. The problem underlying this development research is the low mathematical representation ability of class VIII students of SMP Al-Huda Jatiagung. This study uses the Research and Development (R&D) method with the model ADDIE (Analysis, Design, Development, Implementation, Evaluation). The research design uses a pretest-posttest experimental control group design. Data collection techniques include interviews, observations, questionnaires, and mathematical representation ability tests. Based on the validity analysis, interactive multimedia meets the valid criteria from the assessment of material experts and media experts. Based on the practicality analysis, interactive multimedia meets the practical criteria from the scores of student response and teacher responses. Based on the effectiveness analysis, interactive multimedia can effectively improve students' mathematical representation ability based on the results of the t test and the proportion test. Thus, interactive multimedia using the model discovery learning meets the valid and practical criteria, and is effective in improving students' mathematical representation abilities.

Keywords: Interactive Multimedia, Discovery Learning, Mathematical Representation.