

**PENGEMBANGAN MULTIMEDIA INTERAKTIF BERPENDEKATAN
PROBLEM BASE LEARNING UNTUK MENINGKATKAN HASIL
BELAJAR MATEMATIKA PADA SISWA KELAS 5
SEKOLAH DASAR NEGERI 2 BUNGKULAN**

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ABSTRAK

Rendahnya pemanfaatan media pembelajaran interaktif dan pembelajaran yang masih berpusat pada guru menyebabkan peserta didik mengalami kesulitan memahami konsep bangun datar serta kurang terlibat aktif dalam pembelajaran. Penelitian ini bertujuan untuk mendeskripsikan kualitas rancang bangun, validitas, kepraktisan, dan efektivitas multimedia interaktif berpendekatan Problem Based Learning (PBL) untuk meningkatkan hasil belajar matematika siswa kelas V SD Negeri 2 Bungkulan. Penelitian ini merupakan penelitian pengembangan (Research and Development) menggunakan model ADDIE yang meliputi tahap analysis, design, development, implementation, dan evaluation. Subjek penelitian terdiri atas satu ahli isi, satu ahli desain pembelajaran, satu ahli media, satu guru kelas V, dan 17 siswa kelas V yang terdiri atas 8 siswa perempuan dan 9 siswa laki-laki. Data dikumpulkan melalui observasi, wawancara, angket, dan tes hasil belajar, kemudian dianalisis secara deskriptif kualitatif, deskriptif kuantitatif, serta menggunakan uji Paired Samples t-test setelah memenuhi uji normalitas Shapiro–Wilk. Hasil penelitian menunjukkan bahwa multimedia yang dikembangkan memiliki kualitas rancang bangun yang baik. Persentase validitas sebesar 96% pada ahli isi, 95% pada ahli desain pembelajaran, dan 97% pada ahli media dengan kualifikasi sangat valid. Kepraktisan memperoleh persentase 95% dari guru, 91% pada uji coba perorangan, dan 95% pada uji coba kelompok kecil dengan kualifikasi sangat praktis. Nilai rata-rata meningkat dari 68,65 menjadi 81,12 dan hasil uji Paired Samples t-test menunjukkan signifikansi 0,000 ($p < 0,05$). Dengan demikian, multimedia interaktif berpendekatan PBL memiliki kualitas rancang bangun yang baik, sangat valid, sangat praktis, dan efektif meningkatkan hasil belajar matematika pada materi bangun datar.

Kata kunci: multimedia interaktif, Problem Based Learning , hasil belajar, matematika, ADDIE.

**DEVELOPMENT OF INTERACTIVE MULTIMEDIA BASED ON THE
PROBLEM BASED LEARNING APPROACH TO IMPROVE
MATHEMATICS LEARNING OUTCOMES OF FIFTH-GRADE
STUDENTS AT SD NEGERI 2 BUNGKULAN**

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ABSTRACT

The limited use of interactive learning media and teacher-centered instruction in mathematics has made it difficult for students to understand abstract concepts of plane geometry and has reduced their active participation in learning. This study aimed to describe the design quality, validity, practicality, and effectiveness of interactive multimedia based on the Problem Based Learning (PBL) approach in improving mathematics learning outcomes of fifth-grade students at SD Negeri 2 Bungkulan. This research employed a Research and Development (R&D) method using the ADDIE model, consisting of the analysis, design, development, implementation, and evaluation stages. The subjects were one content expert, one instructional design expert, one media expert, one fifth-grade teacher, and 17 fifth-grade students (8 females and 9 males). Data were collected through observations, interviews, questionnaires, and learning achievement tests, and analyzed using qualitative and quantitative descriptive techniques and a Paired Samples t-test after meeting the normality assumption using the Shapiro–Wilk test. The results showed that the developed multimedia had good design quality. The validity scores were 96% for the content expert, 95% for the instructional design expert, and 97% for the media expert, all categorized as very valid. Practicality scores were 95% from the teacher, 91% in the individual trial, and 95% in the small-group trial, all categorized as very practical. Students' mean scores increased from 68.65 on the pre-test to 81.12 on the post-test, and the Paired Samples t-test yielded a significance value of 0.000 ($p < 0.05$). Therefore, the interactive multimedia based on the PBL approach was found to have good design quality, be highly valid, highly practical, and effective in improving mathematics learning outcomes on plane geometry.

Keywords: interactive multimedia, Problem Based Learning , mathematics learning outcomes, ADDIE, elementary school.