

PENGEMBANGAN KOMIK DIGITAL BERBASIS *PROBLEM BASED LEARNING* PADA MUATAN MATEMATIKA MATERI OPERASI PERKALIAN BILANGAN BULAT SISWA KELAS VI SD NEGERI 1 PADANGBAI TAHUN AJARAN 2024/2025

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ABSTRAK

Penelitian ini bertujuan untuk (1) mendiskripsikan rancang bangun media komik digital berbasis *problem based learning* pada muatan Matematika materi operasi perkalian bilangan bulat siswa kelas VI SD Negeri 1 Padangbai Tahun ajaran 2024/2025, (2) mengetahui kelayakan media komik digital berbasis *problem based learning* pada muatan Matematika materi operasi perkalian bilangan bulat siswa kelas VI SD Negeri 1 Padangbai Tahun ajaran 2024/2025 menurut review para ahli dan uji coba produk, dan (3) mengetahui efektivitas media komik digital berbasis *problem based learning* dalam meningkatkan pemahaman siswa terhadap materi tersebut. Penelitian ini merupakan penelitian pengembangan yang menggunakan model pengembangan ADDIE. Metode pengumpulan data menggunakan kusioner, tes objektif pilihan ganda, dan Teknik analisis data deskriptif kuantitatif serta statistika inferensial. Hasil penelitian ini menunjukkan bahwa (1) rancang bangun komik digital berbasis *problem based learning* dengan hasil penilaian ahli rancang bangun sebesar 92,5% (sangat baik), (2) komik digital berbasis *problem based learning* menunjukkan hasil ahli isi mata pelajaran sebesar 93,75% (sangat baik), ahli desain instruksional sebesar 97,5% (sangat baik), ahli media pembelajaran sebesar 96,15% (sangat baik), dan uji perorangan sebesar 93,3% (sangat baik), serta uji kelompok kecil sebesar 91,3% (sangat baik), dan (3) efektivitas komik digital berbasis *problem based learning* berdasarkan uji t satu sampel menunjukkan nilai signifikan yakni $t_{hitung} = 4,913$. Harga t_{hitung} tersebut dibandingkan dengan harga t_{tabel} pada taraf 5% dengan diketahui $dk = 36$ adalah sebesar 1,688. Hasil tersebut menunjukkan bahwa $t_{hitung} = 4,913 > t_{tabel} = 1,688$, sehingga H_0 ditolak dan H_1 diterima. Jadi dapat disimpulkan media komik digital berbasis *problem based learning* efektif diterapkan pada muatan Matematika materi operasi perkalian bilangan bulat siswa kelas VI SD Negeri 1 Padangbai.

Kata kunci: komik digital, *problem based learning*, matematika, operasi perkalian bilangan bulat

**DEVELOPMENT OF DIGITAL COMICS BASED ON PROBLEM BASED
LEARNING ON THE MATHEMATICAL CONTENT OF THE MATERIAL OF
THE MULTIPLICATION OF INTEGER NUMBERS OF GRADE VI STUDENTS
OF ELEMENTARY SCHOOL 1 PADANGBAI IN THE 2024/2025 ACADEMIC
YEAR**

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ABSTRACT

This study aims to (1) describe the design of digital comic media based on problem based learning on the Mathematics content of the material of the multiplication of integers for grade VI students of Elementary School 1 Padangbai in the 2024/2025 academic year, (2) determine the feasibility of digital comic media based on problem based learning on the Mathematics content of the material of the multiplication of integers for grade VI students of Elementary School 1 Padangbai in the 2024/2025 academic year according to expert reviews and product trials, and (3) determine the effectiveness of digital comic media based on problem based learning on the Mathematics content of the material of the multiplication of integers for grade VI students of Elementary School 1 Padangbai in the 2024/2025 academic year based learning in improving students' understanding of the material. This study is a development research using the ADDIE development model. The data collection method uses a questionnaire, multiple choice objective tests, and quantitative descriptive data analysis techniques and inferential statistics. The results of this study indicate that (1) the design of digital comics based on problem based learning with the results of the expert design assessment of 92.5% (very good), (2) digital comics based on problem based learning show the results of subject content experts of 93.75% (very good), instructional design experts of 97.5% (very good), learning media experts of 96.15% (very good), and individual tests of 93.3% (very good), and small group tests of 91.3% (very good), and (3) the effectiveness of digital comics based on problem based learning based on a one-sample t-test shows a significant value of $t_{\text{count}} = 4.913$. The t_{count} value is compared with the t_{table} value at the 5% level with $dk = 36$ being 1.688. The results show that $t_{\text{count}} = 4.913 > t_{\text{table}} = 1.688$, so H_0 is rejected and H_1 is accepted. So it can be concluded that digital comic media based on problem based learning is effectively applied to the Mathematics content of integer multiplication operations for grade VI students of SD Negeri 1 Padangbai.

Keywords: digital comics, problem based learning, mathematics, integer multiplication operations