

**PENGEMBANGAN *POP-UP BOOK* DIGITAL BARUMATIKA BERBASIS
KONTEKSTUAL MUATAN MATEMATIKA BANGUN RUANG SISWA
KELAS II SD NO. 4 SADING**

Oleh

A.A.A. Putu Dea Maheswari, NIM 2211031046

Program Studi Pendidikan Guru Sekolah Dasar

Jurusan Pendidikan Dasar

ABSTRAK

Penelitian pengembangan ini dilatarbelakangi oleh kurangnya variasi media pembelajaran dalam muatan matematika pada materi bangun ruang, sehingga hasil belajar siswa kurang optimal. Penelitian ini bertujuan untuk (1) mengetahui hasil rancang bangun media *pop-up book* digital Barumatika berbasis kontekstual, (2) mengetahui kelayakan media *pop-up book* digital Barumatika berbasis kontekstual, dan (3) mengetahui efektivitas penggunaan media *pop-up book* digital Barumatika berbasis kontekstual pada pembelajaran matematika materi bangun ruang siswa kelas II sekolah dasar. Penelitian ini merupakan penelitian pengembangan yang mengacu pada model ADDIE. Subjek penelitian ini adalah 26 siswa kelas II sekolah dasar. Metode pengumpulan data yang digunakan adalah metode non-tes berupa angket dan metode tes. Penelitian ini menggunakan teknik analisis data deskriptif kuantitatif, deskriptif kualitatif, dan statistik inferensial. Hasil penelitian menunjukkan bahwa (1) hasil rancang bangun media *pop-up book* digital Barumatika berbasis kontekstual berupa media pembelajaran digital yang memuat halaman pembuka, petunjuk penggunaan, kompetensi pembelajaran, materi bangun ruang yang disajikan melalui teks dan gambar kontekstual, tampilan bangun ruang tiga dimensi, kuis, audio, halaman refleksi, serta profil pengembang, yang dikembangkan berdasarkan *flowchart*, *storyboard*, dan diagram alir sesuai dengan model ADDIE; (2) hasil uji kelayakan menunjukkan media *pop-up book* digital Barumatika berbasis kontekstual dinyatakan layak digunakan dengan kualifikasi sangat baik berdasarkan penilaian ahli isi/materi pembelajaran 96,67%, ahli desain pembelajaran 98,33%, ahli media pembelajaran 90,00%, uji coba perorangan 96,09%, dan uji coba kelompok kecil 96,11%; serta (3) hasil uji efektivitas memperoleh nilai t_{hitung} 1,907 dan nilai t_{tabel} 1,708, sehingga $t_{hitung} > t_{tabel}$ (1,907 > 1,708). Hal ini menunjukkan bahwa rata-rata hasil *post-test* siswa menggunakan media *pop-up book* digital Barumatika berbasis kontekstual lebih dari nilai yang ditetapkan oleh BSKAP (89,04 > 86) yang berarti H_0 ditolak dan H_1 diterima. Berdasarkan hasil tersebut, dapat disimpulkan bahwa media *pop-up book* digital Barumatika berbasis kontekstual efektif diterapkan pada muatan matematika materi bangun ruang siswa kelas II sekolah dasar.

Kata Kunci: *Pop-Up Book* Digital, Pendekatan Kontekstual, Bangun Ruang, Hasil Belajar.

ABSTRACT

This development research was motivated by the lack of variation in learning media used in mathematics, particularly in the topic of three-dimensional shapes, which resulted in less optimal student learning outcomes. This study aims to (1) determine the design and development results of the contextual-based Barumatika digital pop-up book media, (2) determine the feasibility of the media, and (3) examine its effectiveness in mathematics learning on three-dimensional shapes for second-grade elementary school students. This study employed a development research approach based on the ADDIE model. The research subjects consisted of 26 second-grade elementary school students. Data were collected using questionnaires and test, and analyzed through quantitative descriptive, qualitative descriptive, and inferential statistical techniques. The results indicate that (1) the contextual-based Barumatika digital pop-up book media was successfully developed as a digital learning medium containing opening page, user instructions, learning competencies, three-dimensional shape materials presented through contextual text and images, three-dimensional visualizations, quizzes, audio, reflection pages, and a developer profile, developed in accordance with the ADDIE model; (2) the feasibility test results show that the media is categorized as very good and feasible for use in learning activities based on assessments by content experts 96.67%, instructional design experts 98.33%, learning media experts 90.00%, individual trials 96.09%, and small-group trials 96.11%; and (3) the effectiveness test results obtained a t_{count} value of 1.907 and a t_{table} value of 1.708, indicating that $t_{count} > t_{table}$. This demonstrates that the average post-test score of students using the media exceeded the minimum standard established by BSKAP ($89,04 > 86$), so H_0 was rejected and H_1 was accepted. Based on these findings, it can be concluded that the contextual-based Barumatika digital pop-up book media is effective for use in mathematics learning on the topic of three-dimensional shapes for second-grade elementary school students.

Keywords: Digital Pop-Up Book, Contextual Approach, Three-Dimensional Shapes, Learning Outcomes.