

PENGEMBANGAN BUKU PANDUAN PRAKTIK STEM TOPIK PERUBAHAN WUJUD BENDA DI KELAS IV SEKOLAH DASAR

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ABSTRAK

Pengembangan ini bertujuan untuk mengembangkan buku panduan praktik STEM pada topik perubahan wujud benda bagi kelas IV sekolah dasar serta mengevaluasi kualitasnya berdasarkan validitas isi dan respons pengguna. Penelitian menerapkan pendekatan R&D (*Research and Development*) menggunakan model ADDIE sebagai dasar pengembangan. Pengumpulan data menggunakan checklist dalam menilai rancang bangun media, skala relevansi untuk menguji validitas isi, serta kuesioner untuk memperoleh respons pengguna. Penelitian melibatkan subjek dari validator media, validator materi, pengajar, dan peserta didik. Hasil data dianalisis secara kuantitatif. Penilaian rancang bangun dan respons pengguna diolah menjadi persentase menggunakan Skala Likert yang dikonversi ke skala empat, sementara validitas isi dianalisis dengan formulasi Gregory. Hasil pengujian validitas isi menunjukkan bahwa skor 1 dengan klasifikasi sangat tinggi berdasarkan penilaian validator materi dan validator media. Kepraktisan serta kelayakan media ditentukan dari penilaian pengajar dan siswa. Persentase rata-rata respons guru mencapai 96,67%, sedangkan respons peserta didik sebesar 87,04%. Temuan menyimpulkan bahwa buku panduan praktik STEM yang dikembangkan memenuhi kriteria valid, praktis, dan sesuai guna mendukung pembelajaran pada topik perubahan wujud benda untuk kelas IV sekolah dasar.

Kata Kunci: STEM, Sains, Buku Panduan, Sekolah Dasar, Perubahan Wujud Benda.

ABSTRACT

These developments aim to create a STEM practice guidance book focusing on the topic of matter transformation for fourth-grade elementary school students and evaluated based on content validity and user feedback. The study applied an R&D (Research and Development) approach with the ADDIE model as the foundation for development. Data collection utilized a checklist to assess the design of the instructional materials, a relevance scale to test content validity, and a questionnaire to gather user feedback. The study involved participants including media validators, content validators, teachers, and students. The data were analyzed quantitatively. The design evaluations and user feedback were processed into percentages using a Likert scale converted to a four-point scale, while content validity was analyzed using Gregory's formula. The content validity test results showed a score of 1, classified as "very high," based on the assessments of the content validators and media validators. The practicality and suitability of the media were determined based on the assessments of teachers and students. The average response rate for teachers was 96.67%, while that for students was 87.04%. The findings conclude that the developed STEM practice guidebook meets the criteria of being valid, practical, and appropriate to support learning on the topic of changes in the state of matter for fourth-grade elementary school students.

Keywords: STEM, Science, Guidebook, Elementary School, Phase Change Material.

