

ABSTRAK

Purwanti, Camelia Istiqomah (2026), *Pengembangan Activity Book Berbasis Augmented Reality Untuk Meningkatkan Literasi Sains Siswa SD Kelas III Materi Perubahan Wujud Benda*. Tesis, Pendidikan Dasar, Program Pascasarjana, Universitas Pendidikan Ganesha.

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Kata-kata kunci: *activity book, augmented reality*, literasi sains, perubahan wujud benda, sekolah dasar.

Penelitian ini bertujuan untuk mengembangkan *Activity Book* berbasis *Augmented Reality* (AR) yang valid, praktis, dan efektif dalam meningkatkan literasi sains siswa kelas III sekolah dasar pada materi perubahan wujud benda. Pengembangan media pembelajaran ini dilatarbelakangi oleh rendahnya literasi sains siswa sekolah dasar serta belum optimalnya pemanfaatan media pembelajaran inovatif berbasis teknologi yang mampu memvisualisasikan konsep sains secara konkret dan interaktif sesuai dengan karakteristik siswa. Penelitian ini menggunakan metode penelitian dan pengembangan (*Research and Development*) dengan model ADDIE yang meliputi tahap analisis, desain, pengembangan, implementasi, dan evaluasi. Penelitian dilaksanakan di SDN Sumur Welut III Surabaya dengan subjek uji coba sebanyak 30 siswa kelas III. Objek penelitian meliputi validitas, kepraktisan, dan efektivitas *Activity Book* berbasis AR yang dikembangkan. Teknik pengumpulan data menggunakan metode non-tes berupa lembar validasi ahli materi dan ahli desain, serta angket respon guru dan siswa, dan metode tes berupa pretest dan posttest literasi sains. Instrumen penelitian telah diuji validitasnya menggunakan indeks Aiken. Data kepraktisan dianalisis menggunakan *User Experience Questionnaire* (UEQ), sedangkan data efektivitas dianalisis menggunakan uji *paired sample t-test* dan perhitungan *N-gain*. Hasil penelitian menunjukkan bahwa *Activity Book* berbasis *Augmented Reality* memiliki tingkat validitas sangat tinggi dengan indeks validitas ahli materi sebesar 0,94 dan ahli desain sebesar 0,91. Kepraktisan media berada pada kategori sangat baik berdasarkan respon guru dan siswa. Hasil uji efektivitas menunjukkan adanya peningkatan literasi sains siswa secara signifikan antara skor *pretest* dan *posttest* dengan nilai *N-gain* berada pada kategori sedang hingga tinggi. Dengan demikian, *Activity Book* berbasis *Augmented Reality* layak digunakan sebagai media pembelajaran inovatif untuk meningkatkan literasi sains siswa sekolah dasar, serta direkomendasikan untuk dikembangkan pada materi sains lainnya.

ABSTRACT

Purwanti, Camelia Istiqomah (2026). *Development of an Augmented Reality–Based Activity Book to Improve Scientific Literacy of Third-Grade Elementary School Students on the Topic of Changes in the State of Matter*. Thesis, Elementary Education, Postgraduate Program, Universitas Pendidikan Ganesha.

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Keywords: *activity book, augmented reality, scientific literacy, changes in the state of matter, elementary school.*

This study aims to develop an Augmented Reality (AR) based Activity Book that is valid, practical, and effective in improving the scientific literacy of third-grade elementary school students on the topic of changes in the state of matter. The development of this learning media is motivated by the low level of scientific literacy among elementary school students and the suboptimal use of innovative technology-based learning media that can visualize scientific concepts in a concrete and interactive manner in accordance with students' characteristics. This research employed a Research and Development (R&D) method using the ADDIE model, which consists of analysis, design, development, implementation, and evaluation stages. The study was conducted at SDN Sumur Welut III Surabaya with 30 third-grade students as the trial subjects. The research objects included the validity, practicality, and effectiveness of the developed AR-based Activity Book. Data were collected using non-test methods in the form of material expert and design expert validation sheets, teacher and student response questionnaires, and test methods in the form of scientific literacy pretests and posttests. The research instruments were validated using the Aiken's V index. Practicality data were analyzed using the User Experience Questionnaire (UEQ), while effectiveness data were analyzed using a paired-sample t -test and N -gain calculation. The results showed that the AR-based Activity Book achieved a very high level of validity, with material expert validity index of 0.94 and design expert validity index of 0.91. The practicality of the media was categorized as very good based on teacher and student responses. The effectiveness test results indicated a significant improvement in students' scientific literacy between pretest and posttest scores, with N -gain values in the moderate to high category. Therefore, the Augmented Reality based Activity Book is feasible to be used as an innovative learning medium to improve elementary school students' scientific literacy and is recommended for further development in other science topics.