

PENGEMBANGAN MEDIA PEMBELAJARAN BIOLOGI BERBASIS *AUGMENTED REALITY* BOOK KELAS XI SEMESTER GENAP SMA NEGERI 1 KUBUTAMBAHAN

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ABSTRAK

Penelitian ini bertujuan untuk mengembangkan media pembelajaran Biologi berbasis *Augmented Reality Book* untuk kelas XI semester genap di SMA Negeri 1 Kubutambahan. Media ini menggabungkan buku cetak dengan teknologi *Augmented Reality* (AR) yang memungkinkan siswa mengakses visualisasi objek 3D dan penjelasan interaktif melalui perangkat Android. Penelitian ini menggunakan metode Research and Development (R&D) dengan model ADDIE (Analysis, Design, Development, Implementation, Evaluation). Pengembangan dilakukan menggunakan Unity 3D, Blender, dan Vuforia Engine, serta divalidasi melalui uji ahli isi dan media yang memperoleh skor 80 dengan hasil 1.00 dan kriteria "sangat baik". Pengujian dilakukan dalam tiga tahap, yaitu uji coba perorangan dengan 3 siswa memperoleh persentase 91.58% "sangat baik", uji coba kelompok kecil dengan 9 siswa memperoleh persentase 90.18% "sangat baik", dan uji coba lapangan dengan 33 siswa memperoleh persentase 87.53% "baik". Hasil penelitian menunjukkan bahwa media pembelajaran ini valid dan layak digunakan, serta dapat meningkatkan motivasi belajar, pemahaman konsep, dan keterlibatan siswa dalam pembelajaran, sehingga *Augmented Reality Book* dapat menjadi inovasi dalam meningkatkan kualitas pembelajaran Biologi di tingkat SMA.

Kata kunci: *Augmented Reality Book*, Media Pembelajaran, Biologi, ADDIE, Unity 3D.

***DEVELOPMENT OF AUGMENTED REALITY BOOK-
BASED BIOLOGY LEARNING MEDIA FOR CLASS XI
EVEN SEMESTER OF SMA NEGERI 1
KUBUADDITIONAL***

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ABSTRACT

This research aims to develop Biology learning media based on Augmented Reality Book for grade XI even semester at SMA Negeri 1 Kubuaddition. This medium combines printed books with Augmented Reality (AR) technology that allows students to access 3D object visualizations and interactive explanations through Android devices. This research uses the Research and Development (R&D) method with the ADDIE (Analysis, Design, Development, Implementation, Evaluation) model. Development was carried out using Unity 3D, Blender, and Vuforia Engine, and validated through content and media expert tests that obtained a score of 80 with a result of 1.00 and the criteria of "excellent". The test was carried out in three stages, namely an individual trial with 3 students obtaining a percentage of 91.58% "very good", a small group trial with 9 students obtaining a percentage of 90.18% "very good", and a field trial with 33 students obtaining a percentage of 87.53% "good". The results of the study show that this learning media is valid and feasible to use, and can increase learning motivation, concept understanding, and student involvement in learning, so that Augmented Reality Book can be an innovation in improving the quality of Biology learning at the high school level.

Keywords: *Augmented Reality Book, Learning Media, Biology, ADDIE, Unity 3D.*