

ABSTRAK

PUTRI AMELIA PASMA: Pengembangan Komik Edukasi Digital Berbasis *Augmented Reality* (AR) Pada Materi Bangun Ruang Untuk Mengembangkan Kemampuan Visualisasi Spasial Siswa. **Program Studi Pendidikan Matematika FKIP Universitas Malikussaleh, 2026.**

Penelitian ini bertujuan untuk mengetahui kevalidan, kepraktisan, dan keefektifan media pembelajaran komik edukasi digital berbasis *Augmented Reality* (AR) terhadap kemampuan visualisasi spasial siswa.

Jenis penelitian ini adalah penelitian dan pengembangan (*Research and Development*) menggunakan model ADDIE (*Analysis, Design, Development, Implementation, Evaluation*). Subjek penelitian ini adalah siswa kelas VIII SMP Negeri 5 Lhokseumawe, yaitu 6 orang siswa pada uji coba kelompok kecil, serta 34 orang siswa pada uji coba kelompok besar. Teknik pengumpulan data menggunakan lembar validasi ahli, angket respon siswa, dan instrumen tes. Teknik analisis data pada penelitian ini meliputi analisis kevalidan media pembelajaran, analisis kepraktisan media pembelajaran, dan analisis keefektifan media pembelajaran.

Hasil penelitian menunjukkan bahwa: (1) berdasarkan penilaian oleh 2 ahli media diperoleh persentase sebesar 90,00% dengan kriteria “sangat valid”, (2) berdasarkan penilaian oleh 2 ahli materi diperoleh persentase sebesar 95,33% dengan kriteria “sangat valid”, (3) berdasarkan penilaian oleh 2 ahli bahasa diperoleh persentase sebesar 92,26% dengan kriteria “sangat valid”, (4) berdasarkan angket respons 29 orang siswa diperoleh persentase 83,03% dengan kriteria “sangat praktis”, (5) berdasarkan ketuntasan belajar 34 orang siswa dari hasil tes kemampuan visualisasi spasial siswa diperoleh persentase sebesar 82,35% menunjukkan kriteria “sangat efektif”. Sehingga dapat disimpulkan bahwa media pembelajaran komik edukasi digital berbasis *Augmented Reality* (AR) sangat valid, praktis, dan efektif digunakan dalam proses pembelajaran.

Kata kunci: Komik Edukasi Digital, *Augmented Reality* (AR), Kemampuan Visualisasi Spasial

ABSTRACT

PUTRI AMELIA PASMA: Development of Augmented Reality (AR)-based digital educational comics on solid geometry material to develop students' spatial visualization skills. **Mathematics Education Study Program, FKIP University of Malikussaleh, 2026.**

This study aims to determine the validity, practicality, and effectiveness of Augmented Reality (AR)-based digital educational comic learning media on students' spatial visualization skills.

This type of research is research and development (Research and Development) using the ADDIE (Analysis, Design, Development, Implementation, Evaluation) model. The subjects of this study were grade VIII students of SMP Negeri 5 Lhokseumawe, namely 6 students in the small group trial, and 34 students in the large group trial. The data collection technique used expert validation sheets, student response questionnaires, and test instruments. The data analysis techniques in this study include the analysis of the validity of learning media, the analysis of the practicality of learning media, and the analysis of the effectiveness of learning media.

The results of the study showed that: (1) based on the assessment by 2 media experts, a percentage of 90.00% was obtained with the "very valid" criterion, (2) based on the assessment by 2 subject matter experts, a percentage of 95.33% was obtained with the "very valid" criterion, (3) based on the assessment by 2 linguists obtained a percentage of 92.26% with the "very valid" criterion, (4) based on the response questionnaire of 29 students, a percentage of 83.03% was obtained with the criterion of "very practical", (5) Based on the learning completeness of 34 students from the results of the students' spatial visualization ability test, a percentage of 82.35% was obtained indicating the criterion of "very effective". So it can be concluded that Augmented Reality (AR)-based digital educational comic learning media is very valid, practical, and effective in the learning process.

Keywords: Digital Educational Comics, Augmented Reality (AR), Spatial Visualization Capabilities