

ABSTRAK

PENGEMBANGAN MODUL MATEMATIKA BERBASIS *REALISTIC MATHEMATICS EDUCATION* DENGAN *AUGMENTED REALITY* UNTUK MENINGKATKAN KEMAMPUAN PEMAHAMAN KONSEP BANGUN RUANG SISI LENGKUNG

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Penelitian ini bertujuan untuk mengembangkan modul pembelajaran matematika berbasis *Realistic Mathematics Education* (RME) yang dipadukan dengan teknologi *Augmented Reality* (AR) untuk meningkatkan kemampuan pemahaman konsep bangun ruang sisi lengkung. Metode penelitian menggunakan model pengembangan ADDIE yang meliputi tahap analisis, desain, pengembangan, implementasi, dan evaluasi. Hasil validasi oleh ahli materi dan ahli media menunjukkan bahwa modul berada pada kategori valid hingga sangat valid. Uji kepraktisan melalui respon siswa dan guru juga menunjukkan bahwa modul tergolong praktis dan sangat praktis. Uji coba kelompok besar dengan desain eksperimen menunjukkan terdapat perbedaan signifikan hasil posttest antara kelas eksperimen dan kelas kontrol, di mana kelas eksperimen memperoleh rata-rata 84,60 dan lebih tinggi dibandingkan kelas kontrol yang memperoleh 76,20. Dengan demikian, modul berbasis RME berteknologi AR terbukti efektif meningkatkan pemahaman konsep bangun ruang sisi lengkung.

Kata kunci: *Realistic Mathematics Education, Augmented Reality, pemahaman konsep*

ABSTRACT

DEVELOPMENT OF MATHEMATICS-BASED MODULES *REALISTIC MATHEMATICS EDUCATION* WITH *AUGMENTED REALITY* TO INCREASE CONCEPT UNDERSTANDING ABILITY BUILD A CURVED SIDE SPACE

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This research aims to develop a mathematics learning module based on Realistic Mathematics Education(RME) combined with technology Augmented Reality (AR) to improve the ability to understand the concept of curved-sided geometric shapes. The research method uses the ADDIE development model which includes the stages of analysis, design, development, implementation, and evaluation. The validation results by material experts and media experts show that the module is in the valid to very valid category. The practicality test through student and teacher responses also shows that the module is classified as practical and very practical. Large group trials with an experimental design showed a significant difference in posttest results between the experimental class and the control class, where the experimental class obtained an average of 84.60 and was higher than the control class which obtained 76.20. Thus, the RME-based module with AR technology is proven to be effective in improving the understanding of the concept of curved-sided geometric shapes.

Keywords: **Realistic Mathematics Education, Augmented Reality,
understanding of concepts.**