

ABSTRAK

Hazar Maliki Hidayat, 1192050045, 2025, Pengembangan *E-Modul Visual Novel* Berbasis *Ren'py Game Engine* Melalui Pembelajaran Kontekstual Untuk Meningkatkan Kemampuan Pemecahan Masalah Matematis Siswa

Integrasi *game engine* menghadirkan pembelajaran interaktif dan kontekstual yang mendukung kemampuan pemecahan masalah matematis. Namun, kenyataan di lapangan menunjukkan bahwa sebagian siswa masih mengalami kejenuhan dan menghadapi tantangan dalam memahami konsep matematika, sehingga membutuhkan alternatif media pembelajaran yang lebih menarik dan relevan. Tujuan penelitian ini adalah mengembangkan media pembelajaran *Visual Novel Game* yang dapat meningkatkan kemampuan pemecahan masalah matematis siswa SMA. Metode yang digunakan adalah penelitian dan pengembangan (*Research and Development*) dengan model Plomp (*Preliminary Research, Prototyping Phase, dan Assessment Phase*). Data diperoleh dari hasil validasi oleh ahli media dan ahli materi, serta dari respon siswa melalui uji coba lapangan. Analisis data menunjukkan bahwa media pembelajaran *Visual Novel Game* memperoleh kriteria valid dari aspek media dan kriteria sangat valid dari aspek materi. Kepraktisan media berada pada kategori sangat praktis. Keefektifan media termasuk kategori efektif dengan persentase ketuntasan dalam kategori tuntas dan perolehan *n-gain* dalam kategori sedang. Hasil penelitian menunjukkan bahwa media pembelajaran *Visual Novel Game* layak digunakan dan dapat diterapkan pada siswa, serta mampu meningkatkan kemampuan pemecahan masalah matematis siswa SMA dan mendapatkan tanggapan positif dari guru maupun siswa kelas XI di salahsatu SMA Swasta di Kota Bandung.

Kata Kunci: Media pembelajaran, *Visual Novel Game*, *Ren'py*, Kemampuan pemecahan masalah matematis.

ABSTRACT

Hazar Maliki Hidayat, 1192050045, 2025, Development of Ren'py Game Engine-Based Visual Novel E-Modules Through Contextual Learning to Improve Students' Mathematical Problem-Solving Abilities

Game engine integrations deliver interactive and contextual learning that supports mathematical problem-solving capabilities. However, the reality in the field shows that some students still experience boredom and face challenges in understanding mathematical concepts, so they need alternative learning media that are more interesting and relevant. The purpose of this research is to develop Visual Novel Game learning media that can improve the mathematical problem-solving skills of high school students. The method used is research and development with the Plomp model (Preliminary Research, Prototyping Phase, and Assessment Phase). Data were obtained from the results of validation by media experts and material experts, as well as from student responses through field trials. Data analysis shows that the Visual Novel Game learning media obtained valid criteria from the media aspect and very valid criteria from the material aspect. The practicality of the media is in the category of very practical. The effectiveness of the media is included in the effective category with a percentage of completeness in the complete category and n-gain in the medium category. The results of the study show that the Visual Novel Game learning media is feasible to use and can be applied to students, and is able to improve the mathematical problem-solving skills of high school students and get positive responses from teachers and grade XI students in one of the private high schools in the city of Bandung.

Keywords: Learning media, Visual Novel Game, Ren'py, Mathematical problem-solving skills.