

ABSTRACT

History education plays a crucial role in shaping national identity, character, and patriotism among the younger generation. However, conventional teaching methods often make students less interested in learning history. This study designs and develops a 2D educational platformer game themed on Prince Diponegoro's struggle during the Java War 1825–1830 as an interactive and engaging learning medium. The development followed the Game Development Life Cycle (GDLC) stages: initiation, pre-production, production, testing, release, and post-release. The game was implemented using the Unity Engine and targeted at teenagers aged 15–25. Effectiveness evaluation was conducted through pre-tests, post-tests, and user perception questionnaires. The pre-test results showed an average score of 90.00, which increased to 96.88% in the post-test, representing a 7.64% improvement. Questionnaire feedback indicated positive responses toward gameplay, mechanics, and visual aspects, with most respondents stating that the game was easy to understand, challenging, and clearly conveyed educational value. These findings demonstrate that educational platformer games can serve as an effective, relevant, and appealing alternative medium for history learning among today's digital generation.

Keywords: *educational game, 2D platformer, Prince Diponegoro, history learning, Unity Engine.*

ABSTRAK

Pendidikan sejarah berperan penting dalam membentuk identitas nasional, karakter, dan rasa nasionalisme generasi muda. Namun, metode pembelajaran konvensional cenderung membuat siswa kurang tertarik mempelajari sejarah. Penelitian ini merancang dan mengembangkan game edukasi platformer 2D bertema perjuangan Pangeran Diponegoro pada Perang Jawa 1825–1830 sebagai media pembelajaran interaktif yang menyenangkan. Pengembangan menggunakan metode *Game Development Life Cycle* (GDLC) dengan tahapan inisiasi, pra-produksi, produksi, pengujian, rilis, dan pasca rilis. Implementasi dilakukan menggunakan *Unity Engine* dengan target pengguna remaja usia 15–25 tahun. Evaluasi efektivitas dilakukan melalui *pre-test*, *post-test*, dan kuesioner persepsi pengguna. Hasil *pre-test* menunjukkan rata-rata nilai 90,00 dan meningkat menjadi 96,88 pada *post-test*, atau terjadi peningkatan 7,64%. Penilaian kuesioner menunjukkan respons positif terhadap aspek *gameplay*, mekanik, dan visual, dengan mayoritas responden menilai game mudah dipahami, menantang, serta menyajikan nilai edukasi secara jelas. Temuan ini menunjukkan bahwa game edukasi platformer dapat menjadi alternatif media pembelajaran sejarah yang efektif, relevan, dan menarik bagi generasi digital.

Kata kunci: game edukasi, platformer 2D, Pangeran Diponegoro, pembelajaran sejarah, *Unity Engine*.