

ABSTRAK

Muhammad Hernanda Fikri Wijayanto. 2026. Rancang Bangun *Game* Edukasi Jamu Tradisional Berbasis Rpg dan Simulasi dengan Sistem *Farming, Crafting, dan Trading* Menggunakan Godot *Engine*. Skripsi. Program Studi Teknik Informatika, Fakultas Teknik, Universitas PGRI Madiun. Pembimbing (I) Yoga Prisma Yuda, S.Kom., M.Kom., Pembimbing (II) Alim Citra Aria Bima, S.Pd., M.Kom.

Jamu merupakan warisan budaya kesehatan Indonesia yang masih dikenal masyarakat, namun pemahaman mengenai bahan, manfaat, dan proses pembuatannya masih terbatas, khususnya pada generasi muda. Penelitian ini bertujuan merancang dan membangun prototipe game edukasi jamu tradisional bergenre role-playing game (RPG) dengan elemen simulasi yang mengintegrasikan sistem farming, crafting, dan trading menggunakan Godot Engine. Pengembangan dilakukan melalui metode Game Development Life Cycle (GDLC). Materi edukasi diintegrasikan ke dalam mekanik permainan melalui penanaman bahan, peracikan jamu, perdagangan. Pengujian fungsionalitas menggunakan Black Box Testing sebanyak 49 kasus uji, dan seluruh kasus dinyatakan valid, sedangkan pengujian menggunakan instrumen adaptasi System Usability Scale terhadap 23 responden memperoleh skor rata-rata 65,11. Berdasarkan acceptability range, nilai tersebut berada pada kategori Marginal dan sedikit di bawah nilai acuan 68, sehingga prototipe cukup dapat digunakan tetapi masih memerlukan peningkatan pengalaman pengguna.. Penelitian ini menghasilkan prototipe game edukasi jamu tradisional yang fungsional sebagai media interaktif pengenalan bahan, proses, dan informasi dasar jamu, dengan perbaikan pengalaman pengguna pada pengembangan selanjutnya.

Kata kunci: game edukasi, jamu tradisional, Godot Engine, GDLC..

ABSTRACT

Muhammad Hernanda Fikri Wijayanto. 2026. Design and Development of a Traditional Jamu Educational Game Based on RPG and Simulation with Farming, Crafting, and Trading Systems Using Godot Engine. Thesis. Informatics Engineering Study Program, Faculty of Engineering, Universitas PGRI Madiun.

Jamu is an Indonesian cultural heritage of traditional herbal medicine that remains familiar to the public, yet understanding of its ingredients, benefits, and preparation processes is still limited, especially among younger generations. This study aims to design and develop a prototype of a jamu educational game in the Role-Playing Game (RPG) genre with simulation elements integrating farming, crafting, and trading systems using the Godot Engine. Development followed the Game Development Life Cycle (GDLC). Educational content was embedded through planting, herbal crafting, and trading. Functional testing used Black Box Testing with 49 test cases, while usability testing used the System Usability Scale (SUS) with 23 respondents. All Black-box testing produced valid results for all 49 test scenarios, while testing with an adapted System Usability Scale instrument involving 23 respondents obtained an average score of 65.11. Based on the acceptability range, the score was classified as marginal and remained slightly below the benchmark of 68, indicating that the prototype was reasonably usable but still required user-experience improvements. This study produced a functional jamu educational game prototype as an interactive medium for introducing ingredients, processes, and basic jamu information, with further user-experience improvement recommended.

Keywords: educational game, traditional jamu, Godot Engine, GDLC.