

Khafidhotun Toybah, 2025. Pengembangan Game Edukasi Genre RPG pada Materi Algoritma *Greedy* untuk Siswa Kelas XI Informatika, Program Studi Pendidikan Informatika. Fakultas Keguruan dan Ilmu Pendidikan, Universitas Trunojoyo Madura. Pembimbing Ana Tsalitsatun Ni'mah, S.Kom., M.Kom

ABSTRAK

Penelitian ini dilatarbelakangi oleh kesulitan siswa kelas XI SMA Negeri 1 Bangkalan dalam memahami materi algoritma *greedy* pada mata pelajaran Informatika. Materi ini menuntut kemampuan berpikir komputasional karena menggabungkan teori dengan kode pemrograman. Pembelajaran yang hanya mengandalkan presentasi *PowerPoint* sebelum praktik membuat suasana kelas kurang menarik dan cenderung membosankan. Sebagai solusi, dikembangkan game edukasi bergenre RPG sebagai media pembelajaran materi algoritma *greedy* pada kelas XI Informatika. Pengembangan game ini menggunakan model ADDIE yang mencakup tahap Analisis, Desain, Pengembangan, Implementasi, dan Evaluasi. Hasil analisis menunjukkan belum adanya media pembelajaran berbasis game untuk materi ini, sehingga pengembangan dilakukan sebagai inovasi pembelajaran. Game yang dikembangkan memperoleh penilaian sangat layak oleh ahli media 93% dosen dan 96% guru serta ahli materi 99% dari guru dan 93% dari dosen. Uji coba pada kelompok perorangan, kecil, dan besar menunjukkan tingkat kelayakan masing-masing sebesar 96%, 93%, dan 95%. Berdasarkan hasil tersebut, dapat disimpulkan bahwa game edukasi ini sangat baik digunakan sebagai media pembelajaran materi algoritma *greedy* di tingkat SMA.

Kata kunci: *ADDIE*, *Android*, Algoritma *Greedy*, *Game* Edukasi.

Khafidhotun Toyybah, 2025. *Development of Educational Game Genre RPG on Greedy Algorithm Material for Grade XI Informatics Students, Informatics Education Study Program. Faculty of Teacher Training and Education, Trunojoyo University Madura. Supervisor Ana Tsalitsatun Ni'mah, S.Kom., M. Kom*

ABSTRACT

This research is motivated by the difficulties of grade XI students of SMA Negeri 1 Bangkalan in understanding the greedy algorithm material in Informatics subjects. This material requires computational thinking skills because it combines theory with programming code. Learning that only relies on PowerPoint presentations before practice makes the classroom atmosphere less interesting and tends to be boring. As a solution, an RPG genre educational game was developed as a learning medium for greedy algorithm material in grade XI Informatics. The development of this game uses the ADDIE model which includes the stages of Analysis, Design, Development, Implementation, and Evaluation. The results of the analysis showed that there was no game-based learning media for this material, so the development was carried out as a learning innovation. The game that was developed received a very feasible assessment by media experts 93% of lecturers and 96% of teachers and material experts 99% of teachers and 93% of lecturers. Trials on individual, small, and large groups showed feasibility levels of 96%, 93%, and 95%, respectively. Based on these results, it can be concluded that this educational game is very good to be used as a learning medium for greedy algorithm material at the high school level.

Keywords: *ADDIE, Android, Educational Games, Greedy Algorithm.*