

INTISARI

Penelitian ini berjudul “*Simulasi Game Edukasi Pemilahan Sampah Berbasis Android untuk Meningkatkan Kesadaran Lingkungan*”. Tujuan dari penelitian ini adalah mengembangkan sebuah media pembelajaran alternatif berupa *game* edukasi yang dapat meningkatkan pemahaman dan kesadaran remaja mengenai pemilahan sampah organik, anorganik, dan B3. Penelitian dibatasi pada pembuatan *game* berbasis Android dengan pendekatan *Rapid Application Development* (RAD) sebagai metode pengembangan, serta analisis data menggunakan SWOT untuk mengkaji kondisi objek penelitian yaitu Karang Taruna Desa Wonorejo, dan Skala Likert untuk mengukur tingkat kelayakan *game* yang telah dikembangkan.

Hasil penelitian menunjukkan bahwa *game* edukasi AyoPilah! berhasil dirancang dan dikembangkan melalui tahapan pengumpulan data, analisis kebutuhan, perancangan sistem, pengembangan, pengujian, serta implementasi. Game dilengkapi materi edukasi tentang jenis sampah organik, anorganik, dan B3, fitur level permainan, sistem skor, timer, serta panduan bermain. Pengujian kelayakan menggunakan kuesioner kepada anggota Karang Taruna menunjukkan bahwa *game* ini memperoleh persentase kelayakan sebesar 88,05%, yang termasuk dalam kategori *Sangat Layak*. Hal ini membuktikan bahwa *game* dapat diterima dengan baik dari segi fungsionalitas, informasi edukatif, maupun pengalaman pengguna.

Berdasarkan hasil penelitian, dapat disimpulkan bahwa *game* edukasi AyoPilah! layak digunakan sebagai media alternatif untuk mendukung edukasi lingkungan, khususnya dalam meningkatkan pemahaman dan kesadaran remaja terhadap pentingnya pemilahan sampah. Meski demikian, penelitian selanjutnya disarankan untuk menambahkan materi tambahan seperti daur ulang dan pembuatan kompos agar manfaat edukasi lebih komprehensif.

Kata kunci: Game Edukasi, Unity, Pemilahan Sampah, *Rapid Application Development*, Skala Likert

ABSTRACT

This research is entitled “Simulation of Waste Sorting Educational Game Based on Android to Increase Environmental Awareness”. The objective of this study is to develop an alternative learning media in the form of an educational game aimed at improving teenagers’ understanding and awareness of waste sorting, including organic, inorganic, and hazardous waste (B3). The scope of this research is limited to the development of an Android-based game using the Rapid Application Development (RAD) methodology. Data analysis was conducted using SWOT to evaluate the condition of the research object, namely the Karang Taruna community in Wonorejo Village, and the Likert Scale to measure the feasibility of the developed game.

The results indicate that the educational game AyoPilah! was successfully designed and developed through stages of data collection, requirement analysis, system design, development, testing, and implementation. The game integrates educational materials on waste categories, provides multiple levels, scoring system, timer, and gameplay guidance. Feasibility testing through questionnaires distributed to Karang Taruna members shows that the game achieved a feasibility percentage of 88.05%, which falls into the Highly Feasible category. This finding demonstrates that the game is well-accepted in terms of functionality, educational information, and user experience.

In conclusion, the AyoPilah game is considered feasible as an alternative educational media to support environmental education, particularly in enhancing teenagers’ knowledge and awareness of waste sorting. However, future research is recommended to expand the educational content by incorporating topics such as recycling and composting to provide a more comprehensive environmental learning experience.

Keyword: Educational Game, Unity, Waste Sorting, Rapid Application Development , Likert Scale