

Wahyu Mulia Maharani, 2026. Pengembangan Media Pembelajaran Interaktif Berbasis Gamifikasi pada Materi Algoritma dan Pemrograman Mata Pelajaran Informatika. Skripsi, Program Studi Pendidikan Informatika, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Trunodjoyo Madura. Pembimbing Muhamad Afif Effindi S.Kom., M.T.

ABSTRAK

Penelitian ini bertujuan untuk mengembangkan media pembelajaran interaktif berbasis gamifikasi pada materi algoritma dan pemrograman mata pelajaran informatika. Penelitian ini menggunakan metode *Research and Development* (R&D) dengan model ADDIE yang terdiri dari tahap *analysis*, *design*, *development*, *implementation*, dan *evaluation*. Pengujian dilakukan berdasarkan standar ISO 25010 meliputi aspek materi, media, dan sistem. Hasil validasi materi oleh validator 1 memperoleh persentase sebesar 87,5% dan validator 2 sebesar 90% dengan kategori sangat baik. Hasil validasi media oleh validator 1 dan validator 2 masing-masing memperoleh persentase sebesar 93,33% dengan kategori sangat baik. Pengujian *functional suitability* memperoleh hasil 100% dengan kategori dapat diterima. Pengujian *usability* dilakukan pada uji perorangan sebesar 96%, kelompok kecil sebesar 93%, dan kelompok besar sebesar 91% dengan kategori sangat baik. Pengujian *reliability* menggunakan *Apache JMeter* memperoleh hasil yang menunjukkan bahwa sistem mampu berjalan dengan stabil dan responsif dengan nilai *error* sebesar 0,00% serta rata-rata response time sebesar 1173 ms selama proses pengujian berlangsung. Pada aspek *performance efficiency* diperoleh nilai performa sebesar 88%, nilai *YSlow* sebesar 99%, dikategorikan baik. Berdasarkan hasil penelitian, media pembelajaran berbasis gamifikasi layak digunakan dalam pembelajaran informatika.

Kata Kunci: algoritma dan pemrograman, media pembelajaran, model ADDIE, gamifikasi, informatika

Wahyu Mulia Maharani, 2026. Development of a Gamification-Based Interactive Learning Media for Algorithm and Programming Materials in the Informatics Subject. Skripsi, Informatics Education Study Program, Faculty of Teacher Training and Education, Trunodjoyo University, Madura. Supervisor: Muhamad Afif Effindi S.Kom., M.T.

ABSTRACT

This study aims to develop a gamification-based interactive learning media for the Algorithm and Programming topic in Informatics subjects. The research employed the Research and Development (R&D) method using the ADDIE model, which consists of the Analysis, Design, Development, Implementation, and Evaluation stages. The evaluation was conducted based on the ISO 25010 standard, covering material, media, and system aspects. The material validation results showed percentages of 87.5% from Validator 1 and 90% from Validator 2, both categorized as very good. The media validation results from Validator 1 and Validator 2 each achieved a percentage of 93.33%, categorized as very good. Functional suitability testing obtained a score of 100%, indicating that the system was acceptable. Usability testing resulted in scores of 96% for individual testing, 93% for small-group testing, and 91% for large-group testing, all categorized as very good. Reliability testing using Apache JMeter demonstrated that the system operated stably and responsively, with an error rate of 0.00% and an average response time of 1,173 ms throughout the testing process. In terms of performance efficiency, the system achieved a performance score of 88% and a YSlow score of 99%, both categorized as good. Based on the research findings, the gamification-based learning media is feasible for use in Informatics learning.

Keywords: *algorithms and programming, learning media, ADDIE model, gamification, informatics*