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ABSTRAK

Penelitian ini dilatarbelakangi oleh inefisiensi dan subjektivitas yang sering terjadi dalam penilaian manual jawaban uraian, khususnya pada kelas besar seperti mata kuliah Strategi Pembelajaran Kejuruan. Tingginya beban koreksi mengakibatkan lambatnya pemberian umpan balik kepada mahasiswa, yang pada akhirnya menghambat efektivitas evaluasi pembelajaran. Penelitian ini bertujuan mengembangkan sistem ujian berbasis web yang terintegrasi dengan kecerdasan buatan Model Gemini 2.0 *Flash* untuk melakukan koreksi otomatis secara presisi. Menggunakan metode *Research and Development (R&D)* dengan alur *Waterfall*, kualitas sistem diuji berdasarkan standar *ISO 25010*. Hasil validasi ahli materi menunjukkan kelayakan 84,00% pada aspek *Functional Completeness* dan 80,00% pada *Functional Correctness*. Validasi ahli media mencapai kategori sangat layak dengan skor 96,00% untuk *Functional Suitability* dan *Usability*, serta skor sempurna 100% untuk aspek *Performance Efficiency*, *Reliability*, dan *Security*. Lebih lanjut, uji coba pengguna menghasilkan kelayakan 77,00% pada *Functional Suitability*, 83,83% pada *Usability*, 87,17% pada *Performance Efficiency*, serta 87,83% untuk masing-masing aspek *Reliability* dan *Security*. Disimpulkan bahwa sistem ini sangat layak diimplementasikan untuk mendukung efisiensi dan objektivitas penilaian akademik.

Kata kunci: Gemini 2.0 *Flash*, ISO 25010, Koreksi Otomatis, Sistem Ujian Berbasis Web

Abdurrahman Al Khoodhy. 2025. *Development of a Web-Based Examination System Integrated with the Gemini 2.0 Flash Model*. Undergraduate Thesis, Informatics Education Study Program, Faculty of Teacher Training and Education, Trunodjoyo University of Madura. Supervisor: Ana Tsalitsatun Ni'mah, S.Kom., M.Kom.

ABSTRACT

This research is motivated by the inefficiency and subjectivity that often occur in the manual assessment of essay answers, particularly in large classes such as the Vocational Learning Strategy course. The high workload of correction results in delayed feedback to students, which ultimately hinders the effectiveness of learning evaluation. This study aims to develop a web-based exam system integrated with the Gemini 2.0 Flash artificial intelligence model to perform precise automatic corrections. Using the Research and Development (R&D) method with the Waterfall model, the system quality was tested based on the ISO 25010 standard. Material expert validation results showed a feasibility of 84.00% in the Functional Completeness aspect and 80.00% in Functional Correctness. Media expert validation achieved the "very feasible" category with a score of 96.00% for Functional Suitability and Usability, and a perfect score of 100% for Performance Efficiency, Reliability, and Security aspects. Furthermore, user trials yielded a feasibility of 77.00% in Functional Suitability, 83.83% in Usability, 87.17% in Performance Efficiency, and 87.83% for both Reliability and Security aspects. It is concluded that this system is highly feasible to be implemented to support the efficiency and objectivity of academic assessment.

Keywords: *Automatic Correction; Gemini 2.0 Flash; ISO 25010; Web-Based Exam System*