

Hariyanto, 2025. Pengembangan Sistem Informasi Administrasi Pembayaran SPP Berbasis Web Terintegrasi dengan *Email* dan *WhatsApp* di SMK Darul Mustofa, Skripsi, Program Studi Pendidikan Informatika, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Trunojoyo Madura. Pembimbing : Prita Dellia, S.Kom., M.Kom.

ABSTRAK

Penelitian ini bertujuan untuk mengembangkan sistem informasi administrasi pembayaran SPP berbasis web yang terintegrasi dengan notifikasi *Email* dan *WhatsApp* di SMK Darul Mustofa. Latar belakang penelitian ini adalah belum adanya sistem terkomputerisasi yang khusus menangani administrasi pembayaran SPP di sekolah tersebut, sehingga diperlukan solusi yang lebih efisien dan terpusat. Metode pengembangan sistem yang digunakan adalah *Waterfall*, yang meliputi tahapan analisis kebutuhan, desain, implementasi menggunakan PHP dengan *framework CodeIgniter 3* dan database MySQL, pengujian, serta pengoperasian dan pemeliharaan. Integrasi dengan *Email* dan *WhatsApp* diimplementasikan melalui layanan yang relevan untuk mempermudah komunikasi dan notifikasi. Penelitian ini menggunakan empat instrumen diantaranya *functional suitability*, *portability*, *performance efficiency* dan *usability*. Hasil penelitian menunjukkan bahwa sistem yang dikembangkan memenuhi kriteria kualitas perangkat lunak berdasarkan standar ISO 25010 pada empat aspek yang diuji. Aspek *functional suitability* dan *portability* mendapatkan penilaian "sangat baik" (100% dari ahli). Aspek *performance efficiency* menunjukkan kinerja yang "sangat baik" dengan rata-rata waktu respon 1,855 detik, *page speed* 84,4% (Grade B), dan skor YSlow 88,2% (Grade B). Aspek *usability* mendapatkan respons "sangat layak" dari pengguna dengan persentase 89,25%. Berdasarkan hasil pengujian tersebut, dapat disimpulkan bahwa sistem informasi administrasi pembayaran SPP berbasis web yang terintegrasi dengan *Email* dan *WhatsApp* ini layak dan efektif untuk diimplementasikan di SMK Darul Mustofa.

Kata kunci: *Framework Codeigiter*, *Waterfall*, ISO 25010, SMK Darul Mustofa, Sistem Informasi.

Hariyanto, 2025. *Development of a Web-Based Tuition Payment Administration Information System Integrated with Email and WhatsApp at Darul Mustofa Vocational School*, Thesis, Informatics Education Study Program, Faculty of Teacher Training and Education, Universitas Trunojoyo Madura. Supervisor: Prita Dellia, S.Kom., M.Kom.

ABSTRACT

This research aims to develop a web-based school fee (SPP) payment administration information system integrated with email and WhatsApp notifications at SMK Darul Mustofa. The background for this study is the current lack of a dedicated computerized system for SPP payment administration at the school, necessitating a more efficient and centralized solution. The system development method employed is Waterfall, which includes requirements analysis, design, implementation (using PHP with the CodeIgniter 3 framework and MySQL database), testing, and operation and maintenance phases. Integration with Email and WhatsApp was implemented through relevant services to facilitate communication and notifications. This research utilized four instruments: functional suitability, portability, performance efficiency, and usability. The results indicate that the developed system meets software quality criteria based on the ISO 25010 standard across the four tested aspects. The functional suitability and portability aspects received "very good" ratings (100% from experts). The performance efficiency aspect demonstrated "very good" performance with an average response time of 1.855 seconds, a page speed of 84.4% (Grade B), and a YSlow score of 88.2% (Grade B). The usability aspect received a "highly feasible" response from users with a percentage of 89.25%. Based on these test results, it can be concluded that this web-based SPP payment administration information system, integrated with Email and WhatsApp, is suitable and effective for implementation at SMK Darul Mustofa.

Keywords: *Codeigniter Framework, Waterfall, ISO 25010, SMK Darul Mustofa, Information Systems.*