

MEMBANGUN SISTEM INFORMASI PENERIMAAN PESERTA DIDIK BARU DI SMK MUHAMMADIYAH 1 WATES BERBASIS WEB

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ABSTRAK

Tujuan penelitian ini adalah (1) Mengembangkan sistem informasi yang dapat mempermudah kinerja petugas dan calon siswa dalam proses penerimaan peserta didik baru di SMK Muhammadiyah 1 Wates. (2) Menguji kelayakan sistem informasi penerimaan peserta didik baru yang dikembangkan di SMK Muhammadiyah 1 Wates.

Metode penelitian yang digunakan adalah *Research and Development* (R&D) dengan model pengembangan *waterfall*, yang terdiri dari analisis, desain, implementasi, dan pengujian. Pengembangan sistem informasi penerimaan peserta didik baru berbasis *web* ini menggunakan *framework CodeIgniter* untuk fungsi sistem karena sangat efektif untuk membangun aplikasi berbasis *web* dan bekerja berdasarkan konsep dasar MVC sehingga lebih mudah dalam pengelolaan sistem. *Interface* atau antarmuka sistem menggunakan *framework Bootstrap* dan *template AdminLTE* yang bersifat responsif. Pengujian dilakukan untuk mengetahui kualitas dari sistem yang dikembangkan. Pengujian pada penelitian ini menggunakan indikator ISO 25010 yang terdiri dari 6 aspek, yaitu aspek *functional suitability*, *performance efficiency*, *reliability*, *usability*, *maintainability*, dan *portability*.

Hasil penelitian ini adalah (1) Sistem informasi penerimaan peserta didik baru berbasis *web* di SMK Muhammadiyah 1 Wates ini dibangun menggunakan *framework Code Igniter*, *Bootstrap*, dan *AdminLTE*. Model pengembangan dalam penelitian ini menggunakan model pengembangan *waterfall* yang terdiri dari 4 aspek, yaitu analisis, desain, implementasi, dan pengujian. Aplikasi ini memiliki dua pengguna, yaitu admin dan *user* dimana masing-masing pengguna memiliki hak akses yang berbeda. (2) Hasil pengujian dari sistem informasi penerimaan peserta didik baru berbasis *web* di SMK Muhammadiyah 1 Wates berdasarkan aspek *functional suitability* diperoleh nilai sebesar 1 (baik), aspek *performance efficiency* sebesar 88.571 (*grade A*) dan 79.428 (*grade B*), aspek *reliability* sebesar 100% (sukses), aspek *usability* diperoleh persentase sebesar 86.8% (sangat layak), aspek *maintainability* 67.3 (kategori sedang), aspek *portability* yaitu sistem berhasil dijalankan di *web browser* yang telah ditentukan.

Kata Kunci: Sistem Informasi, *Web*, *Waterfall*, ISO 25010.

**DEVELOPING AN INFORMATION SYSTEM
FOR WEB-BASED STUDENT ADMISSION IN MUHAMMADIYAH 1 WATES
VOCATIONAL SCHOOL**

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ABSTRACT

The purpose of this research are (1) To develop information systems to facilitate the performance of officers and prospective students in the process of accepting new students at SMK Muhammadiyah 1 Wates. (2) To test the feasibility of new student admission information system developed at SMK Muhammadiyah 1 Wates.

The research method used is Research and Development (R&D) with a waterfall development model, which consists of analysis, design, implementation, and testing. The development of new web-based student admission information systems uses the CodeIgniter framework for system functions because it is very effective for building web-based applications and works based on the basic concept of MVC so that it is easier to manage the system. The system interface uses the Bootstrap framework and the LTE Admin template which is responsive. Testing is done to determine the quality of the system being developed. Testing in this study uses the ISO 25010 indicator which consists of 6 aspects, namely aspects of functional suitability, performance efficiency, reliability, usability, maintainability, and portability.

The results of this research are (1) The new web-based student admission information system at SMK Muhammadiyah 1 Wates was created using the Code Igniter, Bootstrap, and AdminLTE framework. The development model in this study uses a waterfall development model that consists of 4 aspects, namely analysis, design, implementation, and testing. This application has two users, namely admin and user, where each user has different access rights. (2) The test results of the new web-based student admission information system at SMK Muhammadiyah 1 Wates based on the aspect of functional suitability are 1 (good), Performance efficiency aspects of 88.571 (grade A) and 79.428 (grade B), aspects of reliability by 100% (success), the usability aspect is 86.8% (very feasible), the maintainability aspect is 67.3 (medium category), the portability aspect is that the system is successfully run in the specified web browser.

Keywords: Information Systems, Web, Waterfall, ISO 25010.