

Nurfitria Ningsih. 2025. *Pengembangan Sistem Informasi Inventaris Peminjaman Alat dan Penggunaan Bahan Untuk Pengelolaan Sarana Laboratorium TKJ SMKN 1 Arosbaya*. Skripsi, Program Studi Pendidikan Informatika, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Trunojoyo Madura. Pembimbing Ana Tsalitsatun Ni'mah, S.Kom., M.Kom.

ABSTRAK

Sistem informasi inventaris laboratorium yang efektif merupakan salah satu aspek penting dalam menunjang kegiatan belajar mengajar di sekolah. SMKN 1 Arosbaya menghadapi tantangan dalam pengelolaan inventaris laboratorium yang masih dilakukan secara manual, sehingga rentan terhadap kesalahan dan tidak efisien data. Sistem informasi inventaris laboratorium berbasis *website* dapat menjadi rekomendasi dalam mengatasi permasalahan tersebut. Penelitian ini menggunakan model penelitian *System Development Life Cycle (SDLC) Waterfall*. Dengan 5 tahapan, yaitu *Requirement, Design, Implementation, Verification, dan Maintenance*. Hasil dari penelitian ini adalah sebuah sistem informasi inventaris laboratorium berbasis *website*. Selain itu sistem informasi ini juga memenuhi empat aspek kualitas sistem dari ISO 25010. Kualitas sistem dalam penelitian ini menunjukkan hasil sebagai berikut: 1) aspek *functional suitability* dinilai “**sangat baik**” dengan persentase sebesar 100% dari ahli sistem. 2) aspek *performance efficiency* menunjukkan kecepatan 3,8 detik yang dinilai “**baik**”, serta pada *page speed* mendapatkan presentase 83% dengan grade B dan pengujian *Yslow* sebesar 90% dengan grade A. 3) aspek *portability* mampu beradaptasi dengan berbagai perangkat, juga mendapatkan persentase 100% dari ahli sistem yang dinyatakan **sangat baik**. 4) aspek *usability* sistem memperoleh persentase 86% setelah uji coba pengguna, yang dinyatakan “**sangat layak**”.

Kata kunci: *Waterfall*, inventaris laboratoium, sistem informasi

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ABSTRACT

An effective laboratory inventory information system is one of the important aspects in supporting teaching and learning activities in schools. SMKN 1 Arosbaya faces challenges in managing laboratory inventory which is still done manually, so it is prone to errors and data inefficiency. A website-based laboratory inventory information system can be a recommendation in overcoming these problems. This study uses the System Development Life Cycle (SDLC) Waterfall research model. With 5 stages, namely Requirement, Design, Implementation, Verification, and Maintenance. The results of this study are a website-based laboratory inventory information system. In addition, this information system also meets four aspects of system quality from ISO 25010. The quality of the system in this study shows the following results: 1) the functional suitability aspect is considered "very good" with a percentage of 100% from system experts. 2) the performance efficiency aspect shows a speed of 3.8 seconds which is considered "good", and the page speed gets a percentage of 83% with a grade B and the Yslow test is 90% with a grade A. 3) the portability aspect is able to adapt to various devices, also getting a percentage of 100% from system experts who are stated to be very good. 4) the usability aspect of the system obtained a percentage of 86% after the user trial, which was stated as "very feasible".

Keywords: *Waterfall, laboratory inventory, information system*