INTISARI

Pengelolaan perpustakaan di SMK Batik 1 Surakarta masih dilakukan secara manual menggunakan buku tulis, sehingga menimbulkan berbagai kendala seperti lambatnya pelayanan, kesalahan pencatatan, risiko kehilangan data, dan kesulitan penyusunan laporan. Penelitian terdahulu mengenai sistem informasi perpustakaan berbasis web menunjukkan bahwa penerapan sistem digital mampu mempercepat proses administrasi, mempermudah pencarian buku, serta mengotomatisasi perhitungan denda keterlambatan. Berdasarkan kajian tersebut, penelitian ini bertujuan merancang dan mengembangkan sistem informasi perpustakaan berbasis web menggunakan *framework* Laravel dengan metode *Rapid Application Development* (RAD), serta mengevaluasi keberhasilannya melalui usability testing. Penelitian menggunakan pendekatan campuran kualitatif dan kuantitatif, dengan teknik pengumpulan data berupa observasi, wawancara, studi pustaka, dan kuesioner, sedangkan analisis kebutuhan dilakukan dengan pendekatan SWOT. Hasil pengujian fungsional menggunakan *Black Box Testing* menunjukkan seluruh fitur sistem, meliputi peminjaman, pengembalian, reservasi, pengelolaan denda, katalog, dan laporan, berjalan sesuai harapan. Evaluasi *usability testing* terhadap 20 responden menghasilkan nilai *Effectiveness* sebesar 85%, *Efficiency* sebesar 85,33%, dan *Satisfaction* sebesar 86,33%, dengan rata-rata keseluruhan sebesar 85,88% yang termasuk kategori Sangat Setuju. Dapat disimpulkan bahwa sistem informasi perpustakaan berbasis web yang dikembangkan mampu meningkatkan efisiensi pengelolaan perpustakaan serta memberikan kemudahan dan kepuasan bagi pengguna.

Kata kunci: sistem informasi perpustakaan, *Rapid Application Development*, Laravel, usability testing, *black box testing*

ABSTRACT

Library management at SMK Batik 1 Surakarta is still carried out manually using handwritten ledgers, causing various problems such as slow service, recording errors, the risk of data loss, and difficulty in compiling reports. Previous studies on web-based library information systems show that the implementation of digital systems can speed up administrative processes, ease book searching, and automate the calculation of late fines. Based on this review, this study aims to design and develop a web-based library information system using the Laravel framework with the Rapid Application Development (RAD) method, and to evaluate its success through usability testing. This study employed a mixed-methods approach combining qualitative and quantitative research, with data collected through observation, interviews, literature study, and questionnaires, while requirement analysis was carried out using a SWOT approach. Functional testing using Black Box Testing showed that all system features, including borrowing, returning, reservation, fine management, catalog, and reporting, worked as expected. The usability testing evaluation involving 20 respondents produced an Effectiveness score of 85%, an Efficiency score of 85.33%, and a Satisfaction score of 86.33%, with an overall average of 85.88%, categorized as Strongly Agree. It can be concluded that the developed web-based library information system is able to improve the efficiency of library management and provide convenience and satisfaction for its users.

Keyword: library information system, Rapid Application Development, Laravel, usability testing, black box testing