

ABSTRACT

Administrative letter services at Pangkalan Village are still conducted using a semi-manual process, resulting in inefficient services, potential writing errors, and difficulties in managing and retrieving archives. In addition, the letter approval process may be delayed when the Village Head is not present at the village office. This study aims to design and develop a web-based Letter Service Information System to support the digitization of the submission, verification, approval, issuance, and archiving processes at Pangkalan Village. The developed system is called Sistem Pelayanan Pangkalan Mandiri (SIPANGLI). The software development method used in this study is Extreme Programming (XP), consisting of planning, design, coding, and testing stages carried out iteratively through four iterations. The system was developed using the Laravel framework, PHP programming language, and MySQL database. Functional testing was conducted using Black-Box Testing, while usability evaluation was performed using the System Usability Scale (SUS) involving 10 respondents consisting of the Village Head, Village Operator, and residents of Pangkalan Village. The results show that SIPANGLI successfully integrates the digital letter service process, starting from letter submission by residents, verification by the operator, approval by the Village Head, real-time application status tracking, and issuance of official letters in PDF format. The Black-Box Testing results indicate that the system features function according to the specified requirements. Meanwhile, the SUS evaluation obtained an average score of 82.25, which falls into the Acceptable category, Grade A, with an Excellent adjective rating. Therefore, SIPANGLI is considered suitable for supporting the improvement of efficiency, convenience, and transparency in administrative letter services at Pangkalan Village.

Keywords: Information System, Letter Service, Pangkalan Village, Extreme Programming, SIPANGLI, System Usability Scale.