

ABSTRACT

In the digital era, educational institutions are required to be able to manage academic data effectively to support fast and accurate decision making. This research aims to develop a website-based system and dashboard that can assist lecturers in managing student grades and attendance data, analyzing academic performance, and providing more targeted learning interventions. The system is developed using the waterfall software development method which consists of five stages: requirements analysis, system design, implementation, testing, and maintenance.

In the needs analysis stage, the data required by lecturers, such as grades, attendance, and learning achievement indicators, are identified. The data is stored using Supabase as an RDBMS, while the dashboard is built using Looker Studio to present visualizations such as average grades, attendance rates, and performance segmentation based on Course Learning Outcomes (CLO). The developed website allows for manual data input as well as through the import feature from Excel.

The test results show that the system has an average response time of 537 ms and obtained positive responses from lecturers through usability tests, stating that the system helps speed up the process of analyzing and identifying students with low academic performance. The system also improves lecturers' work efficiency and supports earlier intervention with students. In the future this system can be further developed by adding predictive analysis features to support more proactive decision-making.

Keywords: *waterfall method, data input website, learning analytics dashboard, Supabase, Looker Studio, educational data management.*