

ABSTRACT

The election of the President of the Student Executive Board (BEM) is an annual campus agenda that should ideally be conducted efficiently, transparently, and accountably. At STMIK Widya Utama Purwokerto, this process is still carried out manually, making it prone to recording errors, delays in vote counting, and difficulties in documenting the results. Information regarding the election process and its technical challenges was obtained through interviews with active students.

The conventional voting method creates a gap between the need for a modern digital system and the existing practices. The absence of an electronic system causes the process to be slow, ineffective, and lacking in transparency. Therefore, an information technology-based solution is needed to address these issues and enhance voter trust in the campus democratic process.

This study aims to design and develop a web-based e-voting information system for the simulation of BEM chairman elections. The development method used is the Waterfall model, which includes the stages of requirement analysis, system design, implementation, testing, and documentation. The technology stack consists of React.js for the user interface and Supabase for database and authentication services.

The system facilitates the entire online election process, including student login, one-time voting, photo documentation during voting, and real-time vote result visualization. The system also includes features for data management by admin and superadmin. The testing results indicate that the system functions according to the defined requirements and is suitable as a digital solution to support a modern and transparent student election.

Keywords: *e-voting, student election, Student Executive Board (BEM), information system, Waterfall*