

WEB-BASED STUDENT RESULT MANAGEMENT SYSTEM WITH WHATSAPP INTEGRATION AND DASHBOARD

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ABSTRACT - The Web-Based Student Result Management System with WhatsApp Integration and Dashboard is an innovative solution for effective result management in educational institutions. This system combines a web-based platform, WhatsApp integration, and a user-friendly dashboard to streamline processes and enhance communication among administrators, teachers, and parents/guardians. It aims to develop a web-based application for recording student examination results and integrate it with WhatsApp for seamless communication. The system utilizes web hosting services for database management and storage. Benefits include automated result recording, real-time notifications, and comprehensive data visualization. Administrators can securely log in to add teachers and students, assign classes, and monitor performance through intuitive graphs. Teachers can access student lists, record marks, generate exam slips, and communicate with parents/guardians via WhatsApp. Parents and students can log in to view exam slips and track academic progress. Usability testing with 30 participants, including teachers, administrators, and parents, showed high satisfaction across categories. The Web-Based Student Result Management System with WhatsApp Integration and Dashboard provides an efficient and user-friendly solution for managing student results.

Keywords Student result management system, WhatsApp integration, dashboard, real-time updates, academic progress tracking.

1. INTRODUCTION

The Web-Based Student Result Management System with WhatsApp Integration and Dashboard is an advanced software solution designed to revolutionize the management of student examination results in educational institutions. The system aims to provide a centralized platform for recording, organizing, and analyzing student examination results in a more efficient and accurate manner. The project's objectives are to design and develop the system, integrate it with WhatsApp API, visualize the student's examination results with a dashboard, and evaluate its usability using usability testing. This system involved three users that consist of administrators, teachers, and parents. Administrators can securely log in, manage teachers and students, and monitor performance with intuitive graphs. Teachers can access student lists, record marks, generate exam slips, and communicate via WhatsApp. Parents and students can log in, view exam slips, and track academic progress.

2. METHODOLOGY

The Waterfall Model was chosen as the methodology to use in the development of this system. In order to obtain feedback from 30 respondents—administrators, instructors, and parents—at Sk Teluk Buloh, a questionnaire was distributed. Respondents received a briefing about the project's goals and the testing objectives prior to filling out the questionnaire. Then, in order to allow them to fully explore the system's functions, they were given a link to access the website without any time limits. Respondents were asked to complete the questionnaire after their engagement with the system.

3. RESULTS AND DISCUSSION

The usability testing results for the Web-based Student Result Management System were conducted at SK Teluk Buloh to examine 30 respondents consisting of administrators, teachers, and parents. Moreover, a set of 15 questionnaires was given to the participants after testing the system to gain feedback from them. This system was measured into three categories: user interface satisfaction, usefulness, ease of use of the system, and the Integration with WhatsApp API function in the system, which showed that the system is effective in providing a convenient and efficient platform for managing and monitoring student academic performance. The integration of WhatsApp API allows for easy communication and enhances collaboration and facilitates timely feedback and updates between teachers and parents/guardians. Participants were generally satisfied with the user interface, system functions, and the

effectiveness of the Integration with WhatsApp API. Overall, the Web-based Student Result Management System with WhatsApp Integration and Dashboard is a successful solution for providing an effective tool for managing student results and improving communication in educational institutions.

4. NOVELTY OF RESEARCH / PRODUCT

The Student Result Management System is a software application that automates and streamlines the management of student examination results in educational institutions. It efficiently records, organizes, and analyzes student performance data, addressing the challenges of manual result recording and the static nature of existing report cards. By integrating WhatsApp into the system, administrators, teachers, and parents/guardians can easily communicate and stay connected. Valuable insights into students' feedback preferences via WhatsApp were uncovered in the research study conducted by Soria et al., (2020). The user-friendly dashboard provides comprehensive insights into student performance, enabling data-driven decision-making and customized interventions. Users can effortlessly analyze and visualize data using the dashboard template, as mentioned by Noonpakdee et al., (2018). Visual representations and analytics empower educators to identify patterns, trends, and areas for improvement, leading to enhanced teaching strategies and improved student outcomes (Boscardin et al., 2018).

5. CONCLUSION

The Web-Based Student Result Management System with WhatsApp Integration and Dashboard has improved student result management. WhatsApp integration and a user-friendly dashboard enhance functionality. Future enhancements include LMS integration for data sharing and multi-language support for accessibility.

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