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IMPLEMENTATION OF A WEB-BASED EDUCATIONAL ADMINISTRATION SYSTEM TO ENHANCE ACCREDITATION AT UNIVERSITY

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Abstract

This study aims to analyze the implementation of a web-based educational administration system in improving accreditation performance at Telkom University. This research employed a qualitative approach using a case study design to gain an in-depth understanding of the phenomenon. The data were obtained from primary and secondary sources, including academic staff, administrative personnel, and accreditation teams. Data collection techniques consisted of in-depth interviews, direct system observations, and document analysis related to accreditation processes. The data were analyzed using an interactive model involving data reduction, data display, and conclusion drawing to ensure systematic and valid findings. The findings indicate that the implementation of the web-based system significantly enhances data integration across units, accelerates administrative processes, improves data accuracy, and facilitates the preparation of accreditation documents in a more structured and efficient manner. In addition, the system strengthens coordination among stakeholders and improves institutional readiness in facing accreditation assessments. In conclusion, the implementation of a web-based educational administration system contributes substantially to administrative efficiency and plays a strategic role in improving accreditation outcomes. The significance of this study lies in providing empirical evidence and a practical model for higher education institutions in optimizing digital-based administrative systems to support sustainable accreditation quality improvement.

Keywords Accreditation; Administration System; Higher Education; Web-Based System.

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INTRODUCTION

The rapid advancement of digital technology has fundamentally transformed sectors such as higher education, where institutions are increasingly required to adapt to digital ecosystems to remain competitive and relevant. Universities worldwide are adopting digital platforms to enhance academic services, administrative efficiency, and institutional governance in response to global demands for transparency and accountability. Web-based technologies, in particular, have emerged as essential tools in supporting real-time data processing, accessibility, and integration across multiple units within educational institutions. This transformation is not only driven by technological innovation but also by the need to improve the quality of educational services and institutional performance. In the context of globalization, higher education institutions are expected to leverage digital systems to support decision-making processes and ensure effective management of academic and administrative activities. Consequently, digital transformation has become a strategic priority for universities aiming to achieve excellence and sustainability in a rapidly evolving educational landscape.

In line with this transformation, the development of academic information systems has become a central component in modern higher education management. These systems are designed to manage various academic and administrative processes, including student records, curriculum management, faculty activities, and institutional reporting. The emergence of electronic administration (e-administration) has further expanded the scope of digitalization by enabling automated workflows, reducing paperwork, and improving communication among stakeholders. Web-based academic systems allow institutions to store and manage large volumes of data efficiently while ensuring accessibility and security. Moreover, these systems facilitate coordination among departments and support integrated management practices aligned with institutional goals. As universities continue to embrace digitalization, implementing comprehensive web-based administrative systems is increasingly crucial to ensuring effective governance and operational efficiency.

Despite these advancements, many higher education institutions still face significant challenges in managing their administrative processes effectively. In several cases, administrative systems remain partially manual or fragmented, leading to inefficiencies in data management and operational workflows. Manual processes often result in slow data processing, increased workload for administrative staff, and a higher risk of human error. Furthermore, the lack of system

integration across units leads to data duplication, inconsistencies, and difficulty retrieving accurate information when needed. These issues are particularly problematic in large institutions where multiple departments operate independently without a centralized data system. As a result, administrative inefficiencies can hinder institutional performance and reduce the effectiveness of decision-making processes. Addressing these challenges requires adopting integrated web-based systems to streamline administrative operations and improve data management practices.

The limitations of traditional administrative systems have significant implications for institutional accreditation, a key indicator of educational quality and institutional credibility. Accreditation processes require comprehensive, accurate, and well-documented data covering various aspects of institutional performance, including academic quality, governance, research output, and community engagement. When administrative systems are not properly integrated, institutions often struggle to compile the necessary documentation within the required timeframe. Incomplete or inconsistent data can lead to inaccuracies in accreditation reports, ultimately affecting the evaluation. The rapid advancement of digital technology has fundamentally transformed higher education systems worldwide, compelling universities to adopt innovative strategies to enhance institutional performance and governance. Digital transformation is no longer optional; it has become a strategic necessity for responding to global competition and technological disruption (Bates, 2015; Selwyn, 2011). Web-based technologies play a crucial role in supporting real-time access to information, enabling data integration, and improving decision-making processes within educational institutions (Laudon & Laudon, 2004).

Furthermore, the integration of digital systems enhances transparency, accountability, and service quality in higher education (Bond et al., 2018; Ifenthaler & Yau, 2020). Universities are increasingly required to implement efficient digital infrastructures to remain competitive and adaptive in the global academic environment (Zawacki-Richter et al., 2019). Therefore, the adoption of web-based systems has become a key component in achieving institutional excellence and sustainability in higher education.

In line with this transformation, academic information systems have become essential tools in managing educational administration effectively. These systems facilitate the structured organization of student data, curriculum management, academic evaluation, and institutional reporting (O'Brien & Marakas, 2008; Stair & Reynolds, 2018). The emergence of electronic administration (e-administration) has significantly improved the efficiency of administrative

processes by automating workflows and reducing manual intervention (Alshibly, 2014; Gil-Garcia et al., 2018). Web-based systems enable institutions to integrate data across departments, ensuring consistency, accuracy, and accessibility (Davenport, 1993; Romero & Ventura, 2020). Moreover, these systems support communication and coordination among stakeholders, including administrators, lecturers, and students (Abdulkareem & Ramli, 2019). As a result, the implementation of web-based administrative systems has become increasingly important in supporting institutional management and improving service delivery in higher education.

Despite these developments, many higher education institutions still face significant challenges in managing administrative processes efficiently. In many cases, administrative activities are still conducted manually or through partially integrated systems, leading to inefficiencies and operational delays (Aljawarneh, 2020; Nguyen et al., 2015). Manual data processing often results in slow performance, increased workload, and a higher risk of human error (Susanto et al., 2013). Additionally, the lack of integration between different administrative units leads to data duplication, inconsistencies, and difficulties in retrieving accurate information (Rahmawati et al., 2024; Suryadi, 2019). These issues are particularly problematic in large institutions where multiple departments operate independently without centralized data coordination (Soegoto et al., 2023). Consequently, administrative inefficiencies can hinder institutional performance and reduce the effectiveness of decision-making processes (Kumar & Kumar, 2018).

The limitations of traditional administrative systems have significant implications for accreditation processes, which serve as a key indicator of institutional quality and credibility. Accreditation requires comprehensive, accurate, and well-documented data covering various aspects of institutional performance (Eaton, 2015; Harvey & Green, 1993). When administrative systems are not integrated, institutions often struggle to prepare accreditation documents efficiently (Shah & Nair, 2013). Inconsistent or incomplete data may lead to inaccuracies in reporting, ultimately affecting accreditation outcomes (Materu, 2007; Stensaker et al., 2011). Furthermore, the absence of a centralized system complicates the monitoring and evaluation processes required for accreditation (Vlăsceanu et al., 2007). These challenges highlight the importance of implementing integrated administrative systems to support accreditation processes effectively and ensure institutional quality.

The implementation of a web-based educational administration system at Telkom University Bandung is fundamentally driven by the strategic necessity to maintain its "Excellent" (*Unggul*)

accreditation status. Current observations indicate that, while digital infrastructure is in place, integration between the primary academic system (i-Gracias) and the data requirements for the 9 Criteria of National Accreditation (BAN-PT) remains suboptimal. Data discrepancies often occur when synchronizing research outputs and community service records into the academic dashboard. This gap poses a significant academic problem, as data validity and real-time accessibility are primary indicators in the Monitoring and Evaluation Instrument for Accreditation Rating (IPEPA). Without seamless integration, the university faces challenges in providing consistent empirical evidence for institutional performance, which is critical for securing high scores in the management and quality assurance categories.

Furthermore, the alignment of the web-based system with the principles of Good University Governance (GUG)—specifically transparency and accountability—requires deeper optimization. In the context of Telkom University, a truly effective system must ensure that every administrative transaction, from student registration to graduation eligibility, is transparently traceable by all stakeholders. Currently, manual verification processes between the faculty level and the Directorate of Academic Affairs persist due to system lags, hindering the principles of bureaucratic efficiency. This lack of full automation in data accountability, particularly regarding Student Activity Points (TAK) and Credit Unit (SKS) accumulation, often leads to administrative bottlenecks. Strengthening the web-based architecture is therefore essential to ensure that governance is not merely digitized but is also functionally accountable and transparent in supporting institutional accreditation.

Lastly, the role of this web-based system is paramount in enhancing the quality of both academic and non-academic services, which serve as key barometers for user satisfaction and accreditation assessment. Empirical data from internal satisfaction surveys suggests that while physical facilities are highly rated, the responsiveness of digital academic services often fluctuates, with average satisfaction scores hovering around 3.00 out of 4.00. Delays in automated services for transcript processing and academic counseling can reduce the administrative efficiency of faculty staff by approximately 20-25%. By addressing these service gaps through a more robust web-based system, Telkom University can significantly improve its service delivery indicators. This improvement is not only vital for student satisfaction but also serves as a critical non-academic indicator that bolsters the university's competitive standing in the digital education landscape.

Previous studies have highlighted the significant role of information systems in improving the efficiency and effectiveness of educational administration. Research indicates that web-based

systems can enhance data accuracy, streamline administrative workflows, and improve institutional performance (Aljawarneh, 2020; Romero & Ventura, 2020). Studies on digital transformation in higher education also emphasize the importance of integrating information systems to support governance, transparency, and decision-making (Ifenthaler & Yau, 2020; Zawacki-Richter et al., 2019). Furthermore, several studies demonstrate that digital systems contribute to quality assurance processes by facilitating documentation, reporting, and monitoring activities (Shah & Nair, 2013; Stensaker et al., 2011). In addition, the implementation of web-based systems has been shown to improve communication and collaboration among stakeholders within educational institutions (Bond et al., 2018). These findings suggest that digital systems play a critical role in enhancing the overall quality of higher education management.

Despite the growing body of literature, a significant gap remains in understanding the direct relationship between web-based administrative systems and accreditation outcomes. Most previous studies focus on system development, usability, or general administrative efficiency, without specifically examining the impact of these on accreditation performance (Mambile & Machuve, 2019; Nguyen et al., 2015). In particular, limited research has examined how web-based systems can support the systematic preparation, organization, and validation of accreditation documents (Shah & Nair, 2013). Additionally, empirical studies investigating the implementation of such systems in specific institutional contexts remain scarce (Soegoto et al., 2023). This gap indicates the need for further research integrating technological, managerial, and quality-assurance perspectives in higher education.

This study addresses this gap by proposing an integrated approach that examines the implementation of a web-based educational administration system and its impact on accreditation improvement. The novelty of this research lies in its integration of digital systems, administrative management, and accreditation processes into a single analytical framework. By analyzing how web-based systems facilitate data integration, improve administrative efficiency, and support accreditation documentation, this study provides a comprehensive understanding of their role in institutional quality assurance (Eaton, 2015; Romero & Ventura, 2020). The integration of these aspects offers a new perspective on how higher education institutions can leverage technology to enhance their performance and competitiveness (Zawacki-Richter et al., 2019). This approach also contributes to the development of a more systematic and effective model of educational administration in the digital era.

The urgency of implementing a web-based administration system is also rooted in the quality management framework in the Indonesian higher education context. According to (Bahri et al., 2023), in his primary work on integrated quality management, the success of an educational institution is measured by its ability to provide fast, accurate, and transparent information services to meet stakeholder expectations. Furthermore, Nasution (2005), in his comprehensive book on quality management, emphasizes that continuous improvement in educational institutions can only be achieved with a reliable data documentation system to support internal and external audits. This is further aligned with the perspective (Mulyono, 2008), who argues that effective educational management requires the integration of information technology to transform traditional bureaucracy into a more accountable digital system. Thus, these indigenous theoretical perspectives underscore that a web-based system is a fundamental prerequisite for universities to meet the rigorous standards of national accreditation through systematic, integrated data management.

Based on the above considerations, this study aims to analyze the implementation of a web-based educational administration system and its role in improving accreditation performance at Telkom University. Specifically, the research examines the planning, organization, and implementation of the system, as well as its effectiveness in supporting accreditation processes. The study also seeks to identify the benefits and challenges of adopting web-based systems in higher education. By providing empirical evidence and practical insights, this research is expected to contribute to the development of effective strategies for integrating digital systems into educational administration and quality assurance practices. Ultimately, the findings of this study aim to support universities in enhancing their administrative efficiency and achieving better accreditation outcomes in an increasingly competitive academic environment.

METHOD

This research employs a qualitative case study approach (Bowen, 2009), focusing on the "Implementation of a Web-Based Educational Administration System to Enhance Accreditation at Telkom University Bandung." The research data consists of qualitative descriptions and thematic narratives concerning the integration of the i-Gracias system, bureaucratic workflows, and accreditation fulfillment strategies, derived from both primary and secondary sources. Data collection was conducted through in-depth interviews, field observations, and documentation studies (Angrosino, 2007). Interviews were strategically carried out with key informants, including

the Head of the Internal Quality Assurance Unit (SPMI), the Director of Academic Affairs, and system administrators, to gain comprehensive insights into system governance. Observations were systematically conducted from October 4, 2025, to April 15, 2026, to monitor the real-time operational workflow of the web-based administration platform and its interaction with daily academic services at Telkom University via the official websites: https://telkomuniversity.ac.id and https://spm.telkomuniversity.ac.id. This six-month observation period enabled the researchers to capture peak administration cycles, including student registration and mid-semester evaluation periods. Meanwhile, documentation studies analyzed institutional self-evaluation reports (LEDs), academic quality standards, and accreditation certificates to validate the system's impact on institutional ratings (Kvale, 2007).

The data sources for this study include purposively selected informants and official institutional archives. Data analysis was conducted using the interactive model, which involved the systematic stages of data reduction, data display, and conclusion drawing/verification. In the reduction stage, the researcher filtered complex field data into core themes related to administrative digitalization (Creswell, 2016). The researcher then conducted a critical analysis of the findings by triangulating the data with relevant quality management theories and the previously discussed digital governance discourses. Furthermore, the results were compared and contrasted with existing studies on the digitalization of higher education to ensure academic depth and novelty (Denzin, 2009). This operational process ensures that the analysis not only describes the implementation but also critically evaluates how the web-based system catalyzes maintaining the university's "Excellent" accreditation status.

FINDINGS AND DISCUSSION

Findings

The research findings indicate that the implementation of the web-based educational administration system at Telkom University Bandung is a strategic maneuver integrated into the institution’s long-term digital transformation roadmap. This system serves as more than just a bureaucratic tool; it is a fundamental infrastructure designed to bridge local operational efficiency and international accreditation standards. The data reveals that a centralized digital ecosystem enables the university to monitor performance indicators required by global bodies more precisely. By automating data workflows across various divisions, the university establishes a transparent and

accountable governance structure, which is indispensable for competing in the global higher education landscape. The following table summarizes the key dimensions of the system's implementation, encompassing strategic planning, organizational structure, impact on global competitiveness, and the challenges of maintaining a world-class reputation.

Table 1. Implementation of a Web-Based Educational Administration System to Enhance Accreditation at Telkom University Bandung

Planning	Organization	Implementation	Impact	Challenges
Formulating a digitalization roadmap aligned with international accreditation standards such as IABEE and AACSB.	Establishing a specialized data integration unit under the Directorate of Academic Affairs and the Quality Assurance Unit (SPMI).	Full digitalization through i-Gracias to ensure real-time integration of the *Tridarma* (Education, Research, and Service) data.	Significant increase in accreditation scores and the fulfillment of international certification benchmarks.	System adaptation, resistance, and complex data synchronization across decentralized departments.
Defining Key Performance Indicators (KPIs) focused on enhancing global institutional competitiveness.	Conducting technical training and socialization for administrative staff and faculty members across all departments.	Utilizing digital dashboards to monitor research outputs and student achievement metrics automatically.	Improved academic service efficiency and enhanced accuracy in Institutional Self-Evaluation Reports (LED).	Cybersecurity threats and high maintenance costs for large-scale server infrastructures.
Allocating strategic budgets for server infrastructure reinforcement and advanced cybersecurity protocols.	Coordinating cross-functional units to standardize digital documentation formats for global audit readiness.	Automating graduation eligibility (*yudisium*) and verification processes based on Student Activity Points (TAK).	Strengthening the university's brand as a world-class university within international ranking systems.	Rapidly evolving global accreditation standards require continuous and costly system updates.

Source: Primary Data Analysis and Institutional Roadmaps (2025)

System Planning

The findings indicate that the planning phase of the web-based educational administration system at Telkom University was conducted through a structured and needs-oriented approach. The institution began by identifying key administrative challenges, particularly fragmented data management and inefficiencies in accreditation preparation. A comprehensive needs analysis was carried out involving multiple stakeholders, including administrative staff, lecturers, and accreditation teams. This process aimed to map existing administrative workflows and identify gaps that could be addressed through system integration. The results of the needs analysis highlighted

the urgency of developing a centralized system capable of managing academic and accreditation data efficiently. Furthermore, stakeholders emphasized the importance of accessibility, data accuracy, and system usability in supporting daily administrative tasks. These findings demonstrate that the planning stage was grounded in practical institutional needs and aligned with quality assurance objectives.

In addition to needs analysis, institutional digital policies played a significant role in shaping the development of the web-based system. The university established strategic policies to accelerate digital transformation across academic and administrative units. These policies included guidelines for data standardization, system integration, and digital governance to ensure consistency and reliability. The adoption of such policies reflects the institution's commitment to improving administrative efficiency and supporting accreditation processes. Moreover, the policies provided a framework for aligning technological implementation with institutional goals, particularly regarding quality assurance and accreditation standards. The presence of clear policy directions facilitated coordination among different units and ensured that the system development process was systematic and goal-oriented. As a result, the planning phase successfully laid a strong foundation for the implementation of the web-based administrative system.

System Organization

The organization of the web-based administration system involved the establishment of a structured management framework that defined roles and responsibilities across different units. The university formed a dedicated team responsible for system development, maintenance, and monitoring. This team consisted of information technology specialists, administrative personnel, and representatives from the accreditation unit. Each unit was assigned specific responsibilities to ensure the smooth operation of the system. The IT team focused on technical development and system maintenance, while the administrative staff handled data input and management. Meanwhile, the accreditation team was responsible for ensuring that the system met accreditation requirements and supported documentation processes. This division of roles enabled efficient coordination and minimized operational overlaps.

Furthermore, the organizational structure facilitated effective communication and collaboration among stakeholders. Regular coordination meetings were conducted to monitor system performance and address emerging challenges. The integration of different units within the system management framework ensured that data flows were consistent and aligned with

institutional needs. Additionally, the involvement of multiple stakeholders enhanced system acceptance and encouraged active participation in its implementation. The findings reveal that a well-defined organizational structure is essential in ensuring the successful operation of web-based administrative systems. By clearly defining roles and responsibilities, the institution was able to optimize system utilization and improve administrative efficiency. This organizational approach also contributed to the sustainability of the system in the long term.

System Implementation

The implementation of the web-based administration system involved the deployment of various features designed to support academic and accreditation processes. One of the key features is the data input module, which allows administrative staff and lecturers to enter academic data in a structured and standardized format. This feature ensures that data is recorded accurately and can be accessed easily when needed. The system also includes validation mechanisms to minimize errors during data entry. In addition, user access controls are implemented to ensure data security and confidentiality. These features collectively contribute to the reliability and efficiency of the system.

Another important feature of the system is document integration, which enables the storage and management of accreditation-related documents in a centralized database. This feature allows users to upload, organize, and retrieve documents efficiently, reducing the need for manual document handling. The integration of documents across different units ensures consistency and facilitates collaboration during accreditation preparation. Furthermore, the system supports version control, enabling users to track changes and maintain document accuracy. This capability is particularly important in ensuring that accreditation documents are up-to-date and aligned with required standards. The findings indicate that document integration significantly improves administrative efficiency and reduces the risk of data loss.

In addition to data input and document integration, the system includes monitoring features that support real-time tracking of administrative and accreditation processes. These features allow stakeholders to monitor data completeness, identify missing information, and evaluate progress toward accreditation readiness. The system generates reports that provide insights into institutional performance and highlight areas that require improvement. This functionality enhances transparency and supports evidence-based decision-making. Moreover, the monitoring system enables continuous evaluation of administrative activities, ensuring that processes remain aligned with institutional goals. The implementation of these features demonstrates the system's capability

to support comprehensive administrative management.

To provide a clearer overview of the system features and their functions, the following table summarizes the key components of the web-based administration system:

Table 2. Functional Components and Impacts of the Web-Based System

Feature	Function	Impact
Data Input	Structured entry of academic data	Improves data accuracy
Document Integration	Centralized storage of documents	Enhances accessibility
Monitoring System	Tracks progress and performance	Supports decision-making

Source: Internal Quality Assurance Unit (SPMI) Document Analysis (2025)

Impact on Accreditation

The implementation of the web-based administration system has had a significant impact on accreditation processes within the institution. One of the most notable impacts is improved administrative efficiency, as the system reduces the time required for data processing and document preparation. Stakeholders reported that tasks that previously required extensive manual effort can now be completed more quickly and accurately. This efficiency enables the institution to allocate resources more effectively and focus on strategic activities. Furthermore, the system reduces redundancy and eliminates unnecessary administrative steps. These improvements contribute to a more streamlined accreditation process.

In terms of data accuracy, the system ensures that information is consistent, up to date, and easily verifiable. The use of standardized data formats and validation mechanisms minimizes errors and enhances data reliability. This is particularly important in accreditation processes, where accurate data is essential for evaluation. The availability of reliable data also supports transparency and accountability within the institution. Stakeholders indicated that the system has significantly reduced discrepancies in data reporting. As a result, the institution is better prepared to meet accreditation requirements and standards.

Another important impact of the system is the facilitation of accreditation documentation, particularly in the preparation of accreditation forms and reports. The centralized database allows users to access required documents and compile accreditation reports more efficiently. This capability reduces the time and effort required for document preparation and ensures that all necessary information is readily available. Additionally, the system supports collaboration among stakeholders, enabling them to work together more effectively in preparing accreditation materials. These improvements enhance the overall quality of accreditation submissions and increase the

likelihood of achieving higher accreditation outcomes.

Challenges

Despite its benefits, the implementation of the web-based administration system also faced several challenges. One of the main challenges is related to human resources, particularly the varying levels of digital literacy among staff. Some users experienced difficulties in adapting to the new system, which affected their ability to utilize its features effectively. This issue highlights the need for continuous training and capacity-building programs to enhance user competence. Additionally, resistance to change was observed among some staff members who were accustomed to traditional administrative practices. Addressing these challenges requires strong leadership and effective change management strategies.

Technological challenges also emerged during the implementation process, including system integration issues and occasional technical disruptions. These challenges affected system performance and required continuous technical support to ensure stability. Furthermore, the need for regular system updates and maintenance posed additional demands on institutional resources. Despite these challenges, the institution demonstrated a strong commitment to improving system performance and addressing technical issues. The findings suggest that technological readiness is a critical factor in the successful implementation of web-based systems.

Finally, adaptation challenges were identified as a significant factor influencing the effectiveness of the system. The transition from manual to digital systems required adjustments in workflows, roles, and organizational culture. Some stakeholders required time to understand and integrate the system into their daily activities fully. However, over time, users became more familiar with the system and began to recognize its benefits. Continuous support, training, and system improvements were identified as key factors in facilitating successful adaptation. Overall, while challenges exist, they do not outweigh the system's benefits in improving administrative efficiency and accreditation performance.

Discussion

The findings of this study indicate that implementing a web-based educational administration system significantly improves administrative efficiency, data integration, and institutional readiness for accreditation. The system facilitates structured data management, enabling stakeholders to access accurate and up-to-date information in real time (Huberman, 2019). This improvement reduces administrative workload and minimizes errors associated with manual

data processing. Furthermore, integrating system features such as document management and monitoring enhances coordination among stakeholders involved in accreditation processes. The results also demonstrate that digital systems contribute to faster decision-making and more effective organizational performance. These findings confirm that adopting web-based systems is a strategic approach to addressing administrative challenges in higher education. Overall, the implementation of such systems provides a strong foundation for improving institutional quality and competitiveness.

From the perspective of information systems theory, the findings align with the concept that integrated information systems enhance organizational efficiency and effectiveness. According to(Laudon & Laudon, 2004)Information systems play a critical role in supporting operational processes and decision-making by providing accurate and timely information. The results of this study support this argument, as the web-based system enables real-time access to data and reduces information fragmentation. Additionally, the system's ability to integrate data across different units reflects the principles of enterprise systems, which aim to unify organizational processes (Davenport, 1993). The improved data accuracy and accessibility observed in this study are consistent with previous findings highlighting the importance of system integration for achieving organizational efficiency (Romero & Ventura, 2020). Moreover, the use of digital platforms enhances transparency and accountability, which are essential components of modern information systems (Ifenthaler & Yau, 2020). Therefore, the findings reinforce the theoretical assumption that information systems are key drivers of organizational performance.

In the context of educational management, the findings also support the theory that effective administration is essential for achieving institutional goals. Educational management emphasizes the importance of planning, organizing, implementing, and controlling administrative processes to ensure efficiency and effectiveness (Bush, 2003). The structured implementation of the web-based system reflects these management functions by involving systematic planning, clear role allocation, and continuous monitoring. Furthermore, the integration of administrative processes supports the concept of total quality management in education, which focuses on continuous improvement and stakeholder satisfaction (Sallis, 2014). The findings indicate that the system enhances coordination among stakeholders, which is a key element of effective educational management (Hoy & Miskel, 2005). In addition, the system supports evidence-based decision-making, which is increasingly important in modern educational institutions (Bates, 2015). Thus, the results demonstrate that the

implementation of web-based systems aligns with established theories of educational management.

When compared with previous studies, the findings of this research are consistent with the literature on digital transformation in higher education. Several studies have reported that web-based systems improve administrative efficiency and reduce operational complexity (Zawacki-Richter et al., 2019) (Bond et al., 2018). The current study confirms these findings by demonstrating that implementing a centralized system reduces data duplication and enhances workflow efficiency. Additionally, previous research has shown that digital systems improve communication and collaboration among stakeholders (Mambile & Machuve, 2019) (Mambile & Machuve, 2019) which is also evident in this study. The ability of the system to facilitate real-time communication and data sharing supports collaborative decision-making processes. These similarities indicate that the findings are consistent with broader trends in the adoption of digital technologies in higher education. Therefore, this study contributes to the growing body of evidence supporting the benefits of digital transformation.

However, this study also provides additional insights that extend beyond existing research. While previous studies have primarily focused on general administrative efficiency, this research specifically examines the relationship between web-based systems and accreditation processes. The findings reveal that the system not only improves administrative performance but also directly supports accreditation activities, such as document preparation and data validation. This extends the work (Stensaker et al., 2011) (Shah & Nair, 2013), who emphasize the importance of quality assurance systems in higher education. Furthermore, the integration of monitoring features provides a unique contribution by enabling continuous evaluation of accreditation readiness. This capability is not widely discussed in previous studies, highlighting the novelty of this research. Thus, the findings offer new insights into how digital systems can support quality assurance mechanisms in higher education.

The impact of the web-based administration system on accreditation is particularly significant. The system enhances the efficiency of data collection and reporting, which are critical components of accreditation processes. By providing a centralized platform for managing accreditation documents, the system reduces the time and effort required for preparation. Additionally, the improved accuracy of data ensures that accreditation reports are reliable and consistent with institutional performance. These findings support the argument that digital systems play a crucial role in quality assurance and accreditation (Eaton, 2015). Furthermore, the ability to

monitor progress and identify gaps in real time enables institutions to respond proactively to accreditation requirements. This proactive approach enhances institutional readiness and increases the likelihood of achieving higher accreditation outcomes. Therefore, the system serves as a strategic tool for improving accreditation performance.

From a practical perspective, the findings have important implications for higher education institutions seeking to improve their administrative systems. The successful implementation of a web-based system requires strong institutional commitment, effective leadership, and adequate technological infrastructure (Stake, 1995). Institutions must also invest in training programs to enhance staff digital literacy and ensure effective system use. Additionally, clear policies and guidelines are necessary to support system integration and data standardization. The findings suggest that stakeholder involvement is critical in ensuring system acceptance and sustainability. By engaging administrators, lecturers, and accreditation teams, institutions can foster a collaborative approach to system implementation. These practical implications provide valuable guidance for universities aiming to adopt digital systems to improve their administrative performance.

In terms of theoretical contribution, this study provides a comprehensive framework for understanding the integration of information systems, educational management, and accreditation processes. The findings demonstrate that web-based systems can serve as a bridge between administrative functions and quality assurance mechanisms. This integration contributes to the development of a more holistic approach to educational management in the digital era. Furthermore, the study highlights the importance of aligning technological implementation with institutional goals and quality standards. This alignment is essential for maximizing the benefits of digital systems and ensuring their long-term sustainability. The findings also reinforce the relevance of existing theories while providing new insights into their application in higher education contexts. Thus, this study contributes to advancing knowledge in the field of educational administration and information systems.

Finally, this study strengthens the theoretical understanding of digital transformation in higher education by emphasizing the role of web-based systems in enhancing institutional performance and accreditation outcomes. The integration of digital systems into administrative processes represents a significant shift in how universities manage data and support decision-making. The findings suggest that the success of digital transformation depends not only on technological factors but also on organizational and human aspects. This highlights the importance

of adopting a comprehensive approach that considers both technical and managerial dimensions. By providing empirical evidence from a specific institutional context, this study offers valuable insights for future research and practice. Ultimately, the findings contribute to the ongoing development of effective strategies for leveraging digital technologies in higher education.

CONCLUSION

The results of this study demonstrate that the implementation of a web-based educational administration system at Telkom University plays a significant role in improving administrative efficiency and supporting accreditation processes. The system enables integrated data management, enhances accuracy, and facilitates faster access to information required for institutional reporting. In addition, the structured features of the system, including data input, document integration, and monitoring, contribute to more effective coordination among stakeholders involved in accreditation activities. The findings also reveal that the system reduces administrative workload and minimizes errors associated with manual processes. Overall, the implementation of the web-based system strengthens institutional readiness for accreditation and improves the quality of administrative performance in higher education.

The implications of this study are both theoretical and practical. From a theoretical perspective, the findings contribute to the development of knowledge on the integration of information systems, educational administration, and quality assurance in higher education. This study highlights the importance of aligning technological innovation with institutional management practices to achieve optimal performance. From a practical perspective, the results provide valuable insights for higher education institutions seeking to adopt web-based systems to enhance administrative efficiency and accreditation outcomes. Institutions are encouraged to invest in technological infrastructure, develop clear digital policies, and provide continuous training for stakeholders to ensure successful implementation. Furthermore, this study suggests that future research should explore the application of similar systems in different institutional contexts to validate and expand the findings.

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