

Digital Leadership in Strengthening Institutional Competitiveness: Evidence from an Islamic Higher Education Institution

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Abstract

This study examines the role of digital leadership in strengthening institutional competitiveness within higher education institutions. The rapid development of digital technology has encouraged universities to integrate digital systems into academic governance and service delivery, requiring leadership that is capable of guiding digital transformation strategically and responsibly. This research aims to explore how digital leadership contributes to institutional development through the understanding of digitalization, the implementation of digital strategies within the *Tri Dharma* of higher education, and the ethical governance of digital technologies. A qualitative case study approach was employed at IAIN Lhokseumawe to gain an in-depth understanding of leadership practices related to digital transformation. The findings reveal that leadership awareness of digitalization plays a crucial role in shaping institutional policies and strategies for the development of digital platforms. Digital initiatives have been integrated into various academic activities, including learning management, research administration, and community engagement programs. In addition, ethical leadership emerges as an important element in ensuring that digital technologies are implemented in a manner that emphasizes transparency, accountability, and equitable access. These findings highlight that digital leadership serves as a strategic mechanism for improving institutional coordination, enhancing academic services, and supporting the competitiveness of higher education institutions in an increasingly digital academic environment.

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INTRODUCTION

The rapid development of digital technology has significantly reshaped the way higher education institutions manage academic activities, organizational governance, and knowledge dissemination. Universities are increasingly expected to integrate digital systems into various aspects of institutional management, including academic administration, learning environments, research management, and communication with stakeholders (Halunko, 2022; Kysh, 2022; Matiienko, 2025). This transformation

has encouraged universities to move beyond conventional management practices toward technology-supported governance structures that allow academic services to be delivered more efficiently and responsively (Croucher, 2025; Shakhrukh, 2023; Slamet et al., 2024). In this context, leadership plays an essential role in guiding how digital technologies are adopted and integrated within institutional structures (Abassi, 2025; Lalani et al., 2025; Makhachashvili et al., 2025). Leadership decisions influence not only the selection of digital platforms but also the ways in which technological systems are aligned with institutional objectives and academic values (Ivan et al., 2025; Miller et al., 2023; Vysochinskaya et al., 2023). As higher education institutions continue to adapt to evolving technological environments, leadership capacity to understand and strategically utilize digital technologies becomes increasingly important in ensuring that digital transformation contributes to institutional development and academic competitiveness.

Scholarly discussions on digital leadership have increasingly emphasized the role of leadership in shaping organizational responses to digital transformation. Research suggests that digital leadership involves the ability to align technological innovation with organizational strategy and institutional governance (Cui, 2024; Karasvirta, 2025; Shatila, 2025). In the context of higher education, studies indicate that effective digital leadership enables universities to develop integrated digital ecosystems that support learning, research, and academic services (Cheng et al., 2024; Jing et al., 2025; Visintini, 2022a). Other scholars have also highlighted that digital leadership requires leaders to foster organizational cultures that encourage technological innovation while maintaining institutional accountability (Jimoh, 2025; Shi, 2024; Tran & Stauffer, 2025). In addition, research on digital transformation in universities has shown that digital governance practices influence institutional effectiveness by improving access to information and supporting data-driven decision-making processes (DAMASCHIN-ȚECU & PROȘTEAN, 2025). These studies collectively demonstrate that leadership plays a central role in ensuring that digital initiatives contribute to institutional development rather than merely introducing technological changes without strategic direction. However, much of the existing literature focuses on digital leadership within corporate organizations or general educational contexts, leaving certain institutional contexts relatively underexplored.

Despite the growing body of research on digital leadership and digital transformation in higher education, several gaps remain within the literature. First, many studies focus primarily on technological adoption and organizational change without examining how digital leadership operates within the specific governance structures of higher education institutions. Second, research on digital leadership in higher education often emphasizes technological innovation while paying limited attention to how digital strategies support the broader academic mission of universities. In the Indonesian context, where the *Tri Dharma* of Higher Education—education, research, and community service—serves as the foundation of academic activities, the integration of digital leadership with these institutional responsibilities has received limited scholarly attention. Furthermore, few studies have explored how ethical considerations influence the governance of digital technologies within universities. This gap suggests the need for research that examines digital leadership not only as a technological phenomenon but also as a leadership practice that shapes academic governance, institutional strategy, and ethical management of digital systems.

This study aims to examine the role of digital leadership in strengthening institutional competitiveness within the context of IAIN Lhokseumawe. Specifically, the study explores how leadership understanding of digitalization influences the development of institutional policies and digital strategies, how digital initiatives support the implementation of the *Tri Dharma* of higher education, and how ethical leadership principles guide the governance of digital technology within the university environment. By focusing on these dimensions, the study seeks to provide a comprehensive understanding of how digital leadership operates within higher education institutions that are undergoing digital transformation. The research also contributes to the growing discourse on digital governance in universities by highlighting the relationship between leadership practices, digital innovation, and institutional development.

The study focuses on examining leadership perspectives and institutional practices related to digital transformation in the university environment. Using a qualitative approach, the research explores how institutional leaders interpret digitalization and how digital initiatives are implemented across academic and administrative activities. Particular attention is given to understanding how digital platforms support academic governance, enhance access to institutional services, and improve coordination within the university. In addition, the study examines how ethical considerations such as transparency, accountability, and fair access influence the governance of digital technologies within the institution. By examining these aspects, the study aims to provide an in-depth understanding of digital leadership practices in higher education and how these practices contribute to strengthening institutional competitiveness in an increasingly digital academic environment.

RESEARCHS METHOD

This study employed a qualitative research approach to explore the role of digital leadership in strengthening institutional competitiveness at IAIN Lhokseumawe. A qualitative design was selected because the study aims to understand institutional practices and leadership perspectives within their natural organizational setting (Ganly et al., 2025; Kuecker, 2021; McGuire-Adams & Procyk, 2025). This approach allows the research to capture meanings, experiences, and institutional dynamics that cannot be adequately explained through numerical measurement. The study adopted a case study design focusing on IAIN Lhokseumawe as a single institutional case (Mirzayeva, 2025). The selection of this setting was based on its ongoing efforts to develop digital systems in academic governance and institutional management. By concentrating on one institutional context, the study seeks to obtain a detailed understanding of how digital leadership is interpreted and implemented within the university environment. The case study design provides an opportunity to examine leadership practices, institutional initiatives, and technological developments in an integrated manner, thereby offering a contextualized understanding of digital transformation in higher education institutions (Ho, 2023; Wang & Li, 2024).

Information for this study was obtained from individuals who are directly involved in the development and implementation of digital initiatives within the institution. These participants include institutional leaders, faculty administrators, lecturers, and students who interact with digital academic systems in their daily academic activities. Conversations with these participants provided insights into institutional perspectives, technological practices, and experiences related to digital

governance within the university. In addition to these interactions, institutional documents such as policy records, academic reports, and digital archives were reviewed to understand the development of digital initiatives within the institution. The study was conducted at IAIN Lhokseumawe over several months, allowing sufficient time to examine the institutional environment and understand how digital platforms support academic services. To maintain the credibility of the findings, information from different participants and institutional sources was compared and interpreted carefully to ensure that the descriptions of digital leadership practices accurately reflected the institutional context (Enworo, 2023; Frericks, 2022; Morgan, 2024).

Table 1. Informants Involved in the Study

Informant Code	Position / Role in the Institution	Relevance to the Research Themes
11	Rector of IAIN Lhokseumawe	Provides institutional perspectives on digital leadership policies and the strategic direction of digital transformation.
12	Vice Rector for Academic Affairs	Explains how digital initiatives are integrated into academic services and institutional management.
13	Head of Information Technology Unit	Describes the development and implementation of digital platforms supporting learning, research, and administrative systems.
14	Lecturer and Academic Program Coordinator	Shares experiences related to the use of digital platforms in learning activities and research administration.
15	Student Representative	Provides perspectives as an end user of digital academic systems and reflects the accessibility of digital services within the institution.

The study applied thematic analysis to interpret the information obtained from participants and institutional documents. This analytical approach enables the identification of recurring patterns and meaningful themes related to digital leadership practices within the university environment (Ann & Aziz, 2022; Prosen & Ličen, 2025; Visintini, 2022b). The analysis process began with careful reading of the collected materials to gain a comprehensive understanding of the institutional context. Important statements and descriptions were then grouped into conceptual categories that reflect institutional practices associated with digital transformation. Through this process, several themes emerged that represent key aspects of digital leadership within the institution. The interpretation of these themes focused on understanding how leadership perspectives influence the development of digital strategies, how technological initiatives are implemented in academic activities, and how members of the academic community respond to the presence of digital systems. This analytical approach allows the study to present a structured interpretation of digital leadership practices while maintaining sensitivity to the institutional context in which these practices occur.

RESULT AND DISCUSSION

Result

Based on the thematic analysis of leadership practices and digital initiatives within the institution, three major themes emerged: (1) leadership understanding of digitalization, (2) digitalization strategies in strengthening the *Tri Dharma*, and (3) ethical leadership in managing digital technology.

Leadership Understanding of Digitalization

Leadership understanding of digitalization refers to the capacity of institutional leaders to recognize the strategic role of digital technologies in improving governance, academic services, and institutional competitiveness. Within higher education institutions, this understanding reflects not merely familiarity with technological tools, but also the awareness that digital systems can reshape administrative processes, academic delivery, and information accessibility. Leaders who possess such awareness tend to view digitalization as a strategic direction rather than as a purely technical initiative.

In the context of IAIN Lhokseumawe, leadership awareness of digitalization is reflected in institutional initiatives aimed at integrating digital systems into academic and administrative services. This orientation can be seen in the gradual transition from conventional administrative processes toward technology-supported academic management. Digital platforms have increasingly been positioned as instruments that facilitate academic services, streamline information flow, and improve the responsiveness of institutional management. Consequently, the understanding demonstrated by institutional leaders becomes an important foundation for encouraging the adoption of digital systems that support the operational development of the university.

Leadership perspectives within the institution illustrate that digital transformation is perceived as a necessary step for improving academic management and service efficiency. The direction of leadership policies demonstrates a growing recognition that digital platforms are capable of simplifying administrative procedures while also expanding access to academic information. This awareness has gradually influenced the orientation of institutional management toward technology-supported systems.

This view is reflected in the statement of one institutional leader:

“In recent years, the institution has placed greater attention on developing digital systems because academic services must adapt to the changing demands of higher education (I1).”

A similar perspective was conveyed by another informant who emphasized the role of technology in supporting academic activities:

“Several digital platforms are currently being strengthened so that students and lecturers can access academic services more easily and efficiently (I2).”

The statements above demonstrate that institutional leadership has begun to position digitalization as a strategic direction for academic management. The emphasis on strengthening digital platforms indicates an awareness that the availability of accessible academic systems can enhance service quality and institutional responsiveness. Through this orientation, technology is no longer viewed merely as a supporting facility but rather as a mechanism that facilitates institutional coordination and information management.

In addition, the leadership perspective highlights the role of digital systems in creating more efficient administrative procedures. When academic services are supported by integrated digital platforms, information flows become easier to manage and academic processes can be accessed more transparently by members of the academic community. The perspectives presented by the informants therefore illustrate an institutional effort to gradually adapt its management practices to a technology-

supported environment. These conditions show that leadership understanding plays a foundational role in shaping the direction of institutional digital development.

The relationship between leadership awareness and the implementation of digital systems in the institution is illustrated in **Figure 1**.

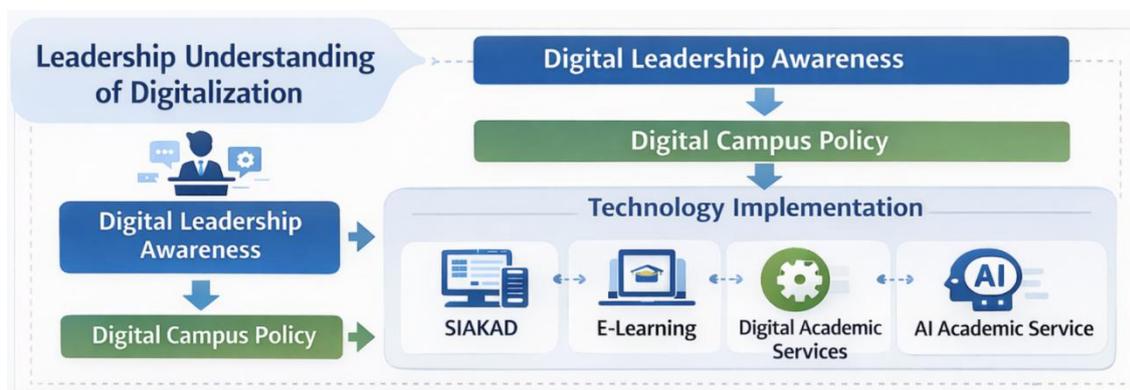


Figure 1. Leadership Understanding of Digitalization and Its Technological Implementation

Figure 1 illustrates the relationship between leadership understanding of digitalization and the implementation of digital systems within the institutional environment. The diagram shows that digital leadership awareness becomes the initial driver that encourages the formulation of digital campus policies, which subsequently lead to the implementation of various technological systems supporting academic governance. These implementations are reflected in the use of several institutional platforms such as the Academic Information System (SIKAD), e-learning platforms, digital academic services, and AI-based academic service applications. The presence of various digital systems within the institution illustrates an ongoing transition toward technology-supported academic governance. Through these developments, digital platforms increasingly function as tools that facilitate information access, improve service efficiency, and support institutional coordination. The patterns observed in the findings therefore suggest that leadership understanding of digitalization serves as a foundational element in shaping the direction of institutional development. As leadership awareness continues to evolve, the integration of digital systems is expected to further strengthen the institutional capacity to respond to the demands of contemporary higher education environments.

Digitalization Strategy in Strengthening the *Tri Dharma*

Digitalization strategy in strengthening the *Tri Dharma* of higher education refers to institutional efforts to integrate digital systems into the core academic responsibilities of universities. In the Indonesian higher education context, the *Tri Dharma* of Higher Education represents the three fundamental missions that guide university activities, namely education and teaching, research, and community service. These three pillars form the main framework through which universities develop knowledge, contribute to societal development, and strengthen their academic reputation. In contemporary higher education environments, the integration of digital platforms has increasingly become an important approach for improving academic performance, expanding access to knowledge, and supporting institutional productivity. Digitalization within the *Tri Dharma* therefore reflects not only the use of technological tools but also an

institutional orientation that positions digital systems as part of academic governance and coordination. Within the context of IAIN Lhokseumawe, digital initiatives have gradually been directed toward supporting learning activities, research management, and community engagement programs through various technology-based platforms that facilitate academic services, improve information accessibility, and strengthen institutional coordination.

Similar developments can also be observed in research and publication activities, where academic management increasingly utilizes digital platforms to facilitate proposal management, research documentation, and publication processes. These systems contribute to more organized academic processes and help improve the visibility of scholarly work produced within the institution. One informant expressed this institutional orientation as follows:

“The availability of digital platforms has helped academic units manage their activities more efficiently, particularly in learning management and research administration (I3).”

The perspectives presented above indicate that digital platforms are increasingly shaping how academic responsibilities are organized within the institution. The integration of digital systems enables academic activities to be managed through more structured platforms, allowing different academic units to coordinate their responsibilities more effectively. Through these developments, digital platforms function as institutional instruments that facilitate communication, documentation, and coordination across various academic activities. The growing reliance on digital systems in areas such as learning management and research administration also reflects a gradual shift toward more integrated academic governance. When academic information and documentation are supported by digital platforms, academic processes become easier to organize and coordinate across institutional units. These conditions demonstrate that digitalization is progressively becoming embedded within the institutional structure of academic management. As a result, digital strategies within the *Tri Dharma* do not only represent technological adjustments but also serve as mechanisms that strengthen institutional coordination and support the development of academic productivity. The digitalization strategies supporting the strengthening of the *Tri Dharma* within the institution are summarized in **Table 1**.

Table 1. Digitalization Strategies in Strengthening the *Tri Dharma* of Higher Education

<i>Tri Dharma</i> Area	Digital Strategy	Benefits
Education	Learning Management System (LMS) and Hybrid Learning	Flexible learning process and wider access to academic resources
Research	Digital proposal management and research data system	More efficient research administration and monitoring
Publication	Digital publication platforms and indexed journals	Increased academic visibility and institutional reputation
Community Service	Digital documentation of community service activities	Improved transparency and accessibility of community programs
Academic Administration	Digital reporting and academic information systems	Performance monitoring and institutional accountability

Table 1 summarizes several digital strategies that support the strengthening of the *Tri Dharma* within the institutional environment, including education, research, publication, community service, and academic administration. The table shows that

each academic responsibility is supported by specific digital platforms that improve efficiency, accessibility, and coordination of academic activities. The findings indicate that digitalization has gradually become an important element in strengthening the implementation of the *Tri Dharma*. The integration of digital platforms in learning activities, research management, publication processes, and community programs reflects a transition toward more coordinated academic governance. Through these developments, digital systems increasingly facilitate access to academic information, support institutional coordination, and contribute to the more structured management of academic responsibilities within the university.

Ethical Leadership in Managing Digital Technology

Leadership perspectives within the institution highlight the importance of maintaining ethical considerations when digital systems are integrated into academic governance. Institutional leaders emphasize that digital platforms should enhance service quality while maintaining fairness and accountability in their use. The increasing reliance on technology therefore requires careful oversight to ensure that academic data, institutional information, and digital services remain reliable and responsibly managed.

One informant expressed this orientation as follows:

“Digital platforms are essential for improving academic services, but their implementation must always be guided by transparency and institutional responsibility (14).”

Another perspective emphasized the role of leadership in ensuring balanced access to digital systems:

“The development of digital services should ensure that all members of the academic community have equal access to institutional systems (15).”

The perspectives presented above indicate that ethical considerations are increasingly becoming part of institutional approaches to digital governance. The emphasis on transparency and fairness suggests that digital systems are expected to operate in ways that maintain accountability within institutional processes, positioning digital platforms not only as technological tools but also as elements of institutional governance that require responsible oversight. Attention to equal access and accountability also reflects the recognition that digital platforms influence how academic services are delivered and how institutional information circulates within the university environment. When digital systems are guided by ethical principles, their implementation can strengthen institutional trust and improve the reliability of academic services. In this context, **Figure 2** illustrates how ethical leadership provides the foundational framework for managing digital technology, where values such as transparency, accountability, and fair access guide the governance of digital systems, including the protection of institutional data, the integration of technological platforms, and the supervision of digital operations within the institution.



Figure 2. Ethical Framework of Digital Leadership in Technology Governance

Figure 2 shows that ethical leadership forms the foundation for managing digital technology within the institution. At the core of this framework are three key principles: transparency, accountability, and fair access. These principles represent the values that guide institutional decisions related to digital platforms and technological services. When these values are embedded within leadership practices, they shape how digital technology is governed and implemented across institutional systems. The model also indicates that ethical leadership contributes to the development of responsible digital governance, which includes the protection of institutional data, the integration of digital systems across organizational units, and the supervision of technological operations. Through these elements, digital technology is positioned not merely as an operational tool but as part of an institutional governance structure that supports responsible and sustainable digital transformation.

Discussion

The findings of this study highlight the growing significance of digital leadership in shaping institutional competitiveness within higher education institutions. Three major themes emerged from the analysis: leadership understanding of digitalization, digitalization strategies in strengthening the *Tri Dharma* of higher education, and ethical leadership in managing digital technology. The results demonstrate that institutional leaders play a critical role in guiding the direction of digital transformation by recognizing the strategic importance of digital platforms in academic governance and service delivery. Leadership awareness of digitalization has encouraged the development of digital policies that support the implementation of academic information systems, e-learning platforms, and technology-based academic services. In addition, the integration of digital systems within educational, research, and community engagement activities illustrates how digitalization has become embedded within the institutional structure of academic management. Ethical leadership also emerges as a key dimension of digital governance, ensuring that technological development is guided by principles such as transparency, accountability, and fair access. These findings indicate that digital leadership does not merely involve technological adoption but also reflects broader institutional efforts to strengthen academic coordination, service efficiency, and institutional competitiveness in the evolving landscape of higher education.

The findings of this study align with previous research emphasizing the strategic role of digital leadership in supporting organizational transformation in educational institutions. Merlano (2024) argue that digital transformation is not driven solely by technological adoption but by leadership capacity to integrate digital strategies into organizational governance. Similarly, Ren et al. (2025) emphasize that digital leadership requires leaders to create an institutional environment that supports innovation and collaboration through digital platforms. The results of this study reinforce these perspectives by demonstrating how leadership awareness of digitalization influences the development of digital policies and the implementation of academic systems within the university environment. In addition, the findings extend previous studies by highlighting the integration of digital strategies within the *Tri Dharma* of higher education, which includes education, research, and community service (Hariyanti & Wirapraja, 2024; Jasmari Jasmari, 2024). This dimension is rarely discussed in digital leadership studies that often focus on corporate or organizational contexts. The study also supports the argument proposed by Halunko (2022) that effective leadership in the digital era must combine technological understanding with ethical governance to ensure that digital transformation benefits the entire organizational community.

This study contributes to the growing body of literature on digital leadership by providing empirical insights into how digital transformation is implemented within an Islamic higher education institution. While previous studies have frequently focused on digital leadership in business organizations or general educational settings, this research highlights the role of digital leadership within the context of higher education governance, particularly in relation to the *Tri Dharma* of higher education. The findings demonstrate that digital leadership in Islamic higher education institutions involves not only technological adoption but also the integration of digital systems within educational management, research administration, and community engagement activities. This perspective contributes to the field of Islamic educational management by illustrating how leadership practices can support institutional competitiveness through digital innovation while maintaining ethical and organizational values. Furthermore, the study proposes a conceptual understanding that links leadership awareness, digital strategies in academic activities, and ethical governance of digital systems as interconnected dimensions of digital leadership in higher education. These insights provide a foundation for future studies examining digital transformation within educational institutions, particularly those operating in faith-based or culturally specific contexts.

The findings of this study emphasize that digital leadership has become a crucial factor in strengthening institutional development in contemporary higher education environments. Leadership awareness of digital transformation encourages the adoption of digital platforms that improve academic coordination, facilitate access to information, and enhance service delivery within the university environment. The integration of digital strategies within the *Tri Dharma* also illustrates how technology can support the broader mission of higher education institutions in developing knowledge and serving society. In addition, ethical leadership plays an essential role in ensuring that digital transformation remains aligned with institutional values and responsible governance. By emphasizing transparency, accountability, and fair access, leaders can ensure that digital platforms contribute positively to institutional management and academic services. These findings indicate that digital leadership should be understood as a

multidimensional process that integrates strategic vision, technological innovation, and ethical governance. Future research may further explore how digital leadership practices evolve in different higher education contexts and how institutional policies can support sustainable digital transformation.

CONCLUSION

The rapid development of digital technology has encouraged higher education institutions to reconsider how leadership practices support institutional competitiveness. This study examined the role of digital leadership in strengthening institutional capacity at IAIN Lhokseumawe. The findings reveal that leadership understanding of digitalization plays a crucial role in shaping institutional strategies and policies related to the development of digital systems. Institutional leaders increasingly recognize that digital platforms can improve academic governance, enhance service efficiency, and facilitate access to academic information. The study also highlights how digitalization strategies have been integrated into the implementation of the *Tri Dharma* of higher education through the use of digital learning platforms, research management systems, and technology-supported academic services. In addition, ethical leadership emerged as an essential component of digital governance, ensuring that technological implementation remains guided by principles such as transparency, accountability, and fair access within the institutional environment.

These findings indicate that digital leadership should be understood as a strategic approach that combines technological innovation with responsible institutional governance. The integration of digital systems within academic activities has the potential to strengthen institutional coordination, improve academic productivity, and enhance the competitiveness of higher education institutions in an increasingly digital environment. For Islamic higher education institutions, digital leadership can also contribute to the development of more adaptive and responsive educational management practices. Future studies may explore how digital leadership evolves across different institutional contexts and how organizational policies can support sustainable digital transformation in higher education.

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