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Leadership Adaptation During AI-Driven Institutional Transformation

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A B S T R A C T

This study explores how leaders adapt to institutional changes driven by artificial intelligence (AI), focusing on leadership strategies, managerial flexibility, and their impact on human resource engagement. Using a qualitative case study with 12 key informants from a higher education institution in Riau, data were collected through in-depth interviews and analyzed thematically. Findings show that effective leadership adaptation relies on articulating a clear AI transformation vision, developing human resource capacity through continuous training, and implementing participatory communication to reduce resistance. The study concludes that leadership adaptation is crucial for sustaining AI-based transformation and contributes both theoretically and practically to adaptive leadership and HR management in the digital era.

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INTRODUCTION

The development of artificial intelligence technology has become a major catalyst for institutional transformation in various sectors, ranging from education, health, to the service industry. The application of artificial intelligence not only changes operational processes, but also demands fundamental changes in leadership patterns, management strategies, and human resource management. Organizations in this era can no longer rely on the traditional static leadership model, because the dynamics of technology demand high adaptive ability from a leader. Globally, many organizations face the challenge of balancing the benefits of technology with the need to maintain human values in the workplace, especially in maintaining employee morality, engagement, and well-being in the midst of system automation (Mer, 2023; Brown & Green, 2022). This condition shows the urgency for more in-depth research on how leadership adaptation is carried out in the face of artificial intelligence-based transformation, especially in the higher education sector which is a pillar of human resource development.

In Indonesia, the phenomenon of digital transformation has become more pronounced in the last decade, especially in higher education institutions and local governments. Many institutions are starting to integrate artificial intelligence-based systems to support academic administration, online learning systems, and more efficient public services. However, the success of technology implementation does not only depend on the readiness of digital infrastructure, but is also highly determined by the ability of leaders to direct change, reduce resistance, and maintain the involvement of lecturers, education staff, and students in the transition process (Indriastuti et al., 2023; Rahman & Nugroho, 2021). In the context of Riau, as one of the provinces with the rapid growth of higher education, institutions face great challenges in adapting leadership patterns to the needs of technological transformation. This requires leaders in the region to have sensitivity to local culture, the readiness of human resources, and potential obstacles that can arise during the process of artificial intelligence integration (Sitorus, 2022).

Previous research has shown that artificial intelligence has major implications for human resource management functions. This technology plays a role in increasing the effectiveness of the recruitment process, providing digital-based training solutions, accelerating competency development, and supporting more accurate decision-making through data analysis (Khan et al., 2024; Patel & Mehta, 2022). Nonetheless, most research places more emphasis on the technical aspects of the use of artificial intelligence, such as the application of algorithms or automation systems, than on the leadership aspect. In fact, adaptive leadership is a key factor that determines the success of institutional transformation (Nguyen & Pham, 2021). This lack of research focus on leadership dynamics creates knowledge gaps that are important to address, especially in the context of developing countries where technological readiness, organizational culture, and quality of human resources are still very diverse.

International studies have indeed begun to touch on the role of artificial intelligence in reformulating leadership practices, but these studies are still

limited. The research conducted by (Sharma et al., 2025) highlights the integration of artificial intelligence-based human resource analytics in the information technology sector, but does not delve into how leaders adapt their leadership style to the organizational culture changes that arise due to technology. Meanwhile, (Wang & Lee, 2022) emphasized the importance of a leader's adaptive skills in the digital age, but their research still lacks empirical evidence relevant to educational institutions in Southeast Asia. These findings are reinforced by recent studies that state that adaptive leadership must consider local cultural factors and values in the face of digital transformation (Garcia & Thomas, 2023). This shows that there is a very important research space to explore, especially in regions such as Indonesia, which is experiencing an acceleration of digital transformation but has different cultural and institutional characteristics from developed countries.

The research gap is also even more evident when looking at the lack of studies that examine the relationship between adaptive leadership and the readiness of human resources in the face of artificial intelligence technology. Research (Novak & Johnson, 2021) shows that employee resistance to the use of artificial intelligence can be minimized through leadership that implements participatory communication. In line with that, research by (Lim & Park, 2022) emphasizes that inclusive leadership support can improve employees' psychological readiness in the face of digital transformation. However, similar studies have not been widely conducted in the Indonesian higher education environment, even though higher education institutions have a strategic role in preparing future generations of workers who are familiar with digital technology (Santoso, 2023). Thus, there is a need to conduct research that focuses more on how leaders in higher education manage resistance, facilitate organizational learning, and build an adaptive work culture.

Based on this background, this study explicitly aims to analyze how leaders in higher education institutions in Riau Province adapt in the face of institutional transformation driven by artificial intelligence technology. The research focus is directed at adaptive leadership strategies carried out by leaders, communication patterns used in conveying the vision of change, human resource capacity development carried out through continuous training, and mechanisms for managing resistance to change. With such an approach, this study is expected to provide a comprehensive empirical picture of leadership dynamics in the digital era.

Theoretically, this research has an important contribution to the development of the literature on adaptive leadership. This study seeks to present empirical evidence from the local context of Indonesia, especially Riau Province, which is still rarely raised in international studies. The findings obtained are expected to enrich understanding of the interaction between organizational culture, technological readiness, and human resource dynamics in the process of leadership adaptation to artificial intelligence-based transformation. Thus, this research not only fills the research gap, but also expands the theoretical horizon in leadership studies in the digital age.

Practically, the results of this research are expected to be able to provide strategic guidance for leaders of higher education institutions in Riau in designing policies that are more responsive to technology. The findings of this research can also be used as a basis for developing more adaptive human resource development programs, strengthening employee engagement, and ensuring the sustainability of institutional transformation driven by artificial intelligence. This research is also relevant for policymakers who want to strengthen digital transformation strategies at the regional level. Thus, this research is relevant not only for academics, but also for education practitioners, policy makers, and organizational leaders who want to optimize the role of leadership in supporting the success of technology-based institutional transformation.

THEORETICAL REVIEW

Digital and Adaptive Leadership in Higher Education

Digital and adaptive leadership is one of the key factors in the success of institutional transformation in the era of artificial intelligence. Recent studies show that digital leadership plays a role in integrating technology, encouraging virtual collaboration, and developing an organizational culture that is responsive to change (Sukandi, 2024). This is in line with the findings that adaptive leadership helps leaders navigate curriculum changes, digitization of services, and accreditation in higher education through strategic flexibility, open communication, and empowerment of the academic community (Abdurahimova, 2025). Therefore, adaptive and digital leadership can be considered as the main foundation in the artificial intelligence-based transformation process.

Leadership Strategy in Digital Transformation and AI

Digital transformation requires leaders to develop strategies that are able to overcome technological complexity and organizational resistance. (Evitha, 2024) emphasized that higher education leaders must emphasize investment in human resource training, digital security, and the use of online platforms to support administrative efficiency. Meanwhile, (Surianto et al., 2023) highlighted the importance of digital literacy, work flexibility, and technology-based skill development as a human resource management strategy to increase organizational adaptability. Thus, an effective leadership strategy does not only focus on technology, but also includes a managerial approach that is able to build change readiness.

Human Resource Readiness and Its Influence on Leadership

The readiness of human resources plays an important role in determining the extent to which adaptive leadership can run effectively in the era of artificial intelligence. Studies on authentic leadership behavior have found that leaders who are able to encourage staff engagement can improve digital capabilities and work productivity (Fernandez & Ibrahim, 2024). In addition, other research shows that although AI-based technology can improve learning personalization and administrative efficiency, obstacles in the form of limited digital literacy and

educator readiness are still major challenges (Haetami, 2024; Rahmat et al., 2021). Therefore, the role of leaders is crucial in building the capacity of human resources to be able to adapt to technological changes.

Organizational Culture, Justice, and Inclusion in Transformation

In addition to technical factors, the success of leadership adaptation is also determined by organizational culture and inclusivity. Higher education leaders need to ensure that the digital transformation process still considers aspects of justice in access to technology, digital literacy, and professional development opportunities for all academics (Mabaso, 2024). Another study found that transformational leadership, servant leadership, and digital leadership are the dominant models in Indonesian higher education, but adaptive leadership that focuses on inclusion and responsiveness to technological developments is still underpaid (Sianipar et al., 2024). This suggests that adaptive leadership has great room to explore further, especially in the culturally diverse context of higher education.

Leadership Dynamics in the Context of AI

The integration of artificial intelligence requires leaders to develop new capabilities in making data-driven decisions, building trust, and maintaining a balance between technological efficiency and human value. (Hossain et al, 2025) stated that AI-based leadership capabilities include analytical skills, digital strategic thinking, and ethical orientation in the use of technology. This confirms that adaptive leadership is not only about managerial flexibility, but also about the leader's capacity to integrate intelligent technology in a sustainable manner without neglecting aspects of organizational morality.

METHODOLOGY

Types and Approaches to Research

This study uses a qualitative approach with a case study design to explore in depth the phenomenon of leadership adaptation in institutional transformation driven by artificial intelligence. The qualitative approach was chosen because it was able to uncover the social dynamics, perceptions, and strategies carried out by leaders in dealing with complex technological changes (Hamilton & Finley, 2023). The case study design is considered relevant because it provides space to analyze the phenomenon of leadership adaptation in a specific context, namely higher education institutions in Riau Province that are implementing artificial intelligence-based technology (Merriam & Grenier, 2022).

Population and Sampling Techniques

The research population consists of unit leaders, managers, senior staff, lecturers, and administrative staff at one of the universities in Riau that is running an artificial intelligence-based digital transformation program. The sampling technique uses non-probability purposive sampling, with the consideration that participants are selected based on positions and experiences relevant to the research phenomenon (Etikan & Bala, 2023). A total of 12 participants were

involved, including three unit leaders, five managers, two senior staff, one lecturer, and one administrative staff. This number is considered adequate for qualitative research because it allows for an in-depth exploration of leadership experiences and strategies (Boddy et al., 2022).

Data Collection Techniques

Data were collected using semi-structured in-depth interviews, limited participatory observations, and institutional documentation. The interview instrument was developed based on the adaptation of previous research guidelines on adaptive leadership and digital transformation (Harvey & Jones, 2021). The interview guidelines cover themes regarding leadership strategies, communication mechanisms, and management of resistance to change. The validity of the content of the instrument was tested through expert tests involving two academics in the field of education management. The reliability of the data is maintained by triangulation techniques, namely comparing the results of interviews with observations and documentation (Carter et al., 2021).

Research Procedure

The research was carried out through four stages. First, the preparation stage, including the preparation of interview instruments, licensing, and participant selection. Second, the data collection stage, including in-depth interviews, recording of observation results, and collecting documents related to digital policy. Third, the data reduction stage, where the results of the interviews are transcribed verbatim and verified by participants to ensure the accuracy of the data. Fourth, the stage of compiling results, namely conducting thematic analysis and presenting research findings according to the themes that emerge (Nowell et al., 2022).

Data Analysis Techniques

The data was analyzed using thematic analysis with the help of NVivo 14 software to organize and code the interview data. The analysis was carried out through three main stages: (1) open coding to identify units of meaning, (2) axial coding to group interrelated themes, and (3) selective coding to build key categories regarding leadership adaptation strategies (Clarke & Braun, 2021). The use of software supports transparency and systematization of the analysis process, thereby increasing the credibility of research results. Validation was carried out through member checking of participants and peer debriefing with fellow researchers (Daniel & Harland, 2023).

RESULTS AND DISCUSSION

Articulating the Vision of Artificial Intelligence-Based Transformation

The results of the study show that leaders of higher education institutions in Riau Province have a central role in formulating and communicating the vision of artificial intelligence-based transformation. This vision is understood as a strategic direction that not only emphasizes on modernizing digital infrastructure, but also includes changes in work culture and the mindset of the academic community. The majority of unit leaders are able to articulate long-

term goals, particularly in terms of digitizing academic services, integrating administrative systems, and utilizing AI-based data to support decision-making. The vision that is consistently conveyed has been proven to be able to reduce uncertainty, strengthen the trust of the academic community, and motivate lecturers and education staff to be more open to change.

However, the results of the study also show that there is a gap in understanding between unit leaders and senior staff. Leaders tend to emphasize strategic and long-term aspects, while staff need more concrete explanations of the practical implications of the vision in day-to-day work. This causes variations in the level of acceptance of digital transformation among the academic community. A unit leader said: "*We want everyone to see that AI integration is not just a technology project, but a new direction that will change the way we work and serve students. This vision must be understood together.*" (Informant P1, interview June 5, 2025).

Meanwhile, senior staff expressed confusion about the relevance of the vision to their daily tasks: "*The vision conveyed is good, but we still haven't seen how it will be implemented in our day-to-day work. We need a clearer example so that we don't make a mistake.*" (S2 informant, interview June 12, 2025). In the same context, one of the managers emphasized the importance of communication consistency so as not to create ambiguity: "*If the vision is only conveyed once or twice, people will quickly forget. We try to repeat that message at every meeting so that all staff can be more confident and feel part of the change.*" (M3 informant, interview June 20, 2025).

Thus, although the vision of artificial intelligence-based transformation has been formulated quite clearly at the leadership level, the success of its implementation depends heavily on the extent to which leaders are able to bridge the gap of understanding between the management level and the executive staff.

Human Resource Capacity Development

The findings of the study also indicate that human resource capacity development is the main strategy in supporting leadership adaptation in the era of artificial intelligence. Digital-based training programs, workshops on the use of AI applications, and technical assistance have been routinely carried out at higher education institutions where the research is located. This training not only provides practical knowledge about the use of technology, but also serves as a means of building employee confidence to adopt digital innovations. The majority of participants considered that continuous activities provide motivation while reducing anxiety about changes in the work system.

Nevertheless, obstacles still arise, especially related to the limitations of early digital literacy among lecturers and education staff. Some senior lecturers have difficulty understanding technical terms or operating AI-based applications. Therefore, leaders are required to take a gradual approach, namely adjusting the intensity and training materials to the individual's level of readiness. This is intended so as not to cause new resistance that actually hinders the transformation process. One manager emphasized the importance of personal mentoring in the technology learning process: "*If you only rely on*

workshops, not all lecturers can understand right away. We usually accompany them directly, one by one, to be more confident." (Informant M2, interview June 7, 2025).

Senior staff also said that practical mentoring helped them a lot in overcoming technical obstacles: "*At first I felt insecure because I wasn't used to the new application, but after the mentoring, I became more confident and it turned out to be not as complicated as I imagined.*" (Informant S4, interview June 14, 2025). A unit leader even emphasized that continuous training is the key so that the academic community is not left behind: "*We can't stop at one or two trainings. This transformation must continue to be accompanied by an increase in competence, otherwise the staff will quickly fall behind.*" (Informant P2, interview June 25, 2025).

Overall, the results of the study show that human resource capacity development is not only a supporting aspect, but is the core of a leadership adaptation strategy. Training and mentoring programs have been proven to increase employee confidence, but the digital literacy gap still demands an inclusive and sustainable leadership approach.

Application of Participatory Communication

Research has found that participatory communication is a key instrument in reducing resistance to artificial intelligence-based transformation. Leaders at higher education institutions in Riau Province actively utilize regular discussion forums, informal meetings, and internal digital platforms to gather input from lecturers and staff. This strategy not only serves as a means of conveying information, but also as a medium to build a sense of shared ownership towards the direction of organizational change. This two-way communication creates a stronger sense of involvement among the academic community, so that they feel that their voices are also taken into account in the transformation process.

For some staff, this open dialogue space encourages mental readiness to embrace change, although there are still technical challenges in operating AI-based technologies. One of the unit leaders emphasized this by saying: "*We always open a discussion room. Not only conveying instructions, but also hearing what they are worried about. That way, they feel part of this process, not just an object of change.*" (Informant P3, interview June 6, 2025). Meanwhile, one manager mentioned that communication forums help staff feel more confident because they can express difficulties directly: "*Sometimes staff are embarrassed to ask questions in a big forum, so we have small meetings. It's more effective, because they have the courage to say what they don't understand.*" (M4 informant, interview June 15, 2025).

However, there is still criticism from senior staff who feel that the intensity of communication is not even in all work units. One of the staff revealed: "*There are discussions, but not all units get the same opportunity. If communication could be more frequent and comprehensive, we would be better prepared to accept this change.*" (Informant S1, interview June 22, 2025). From these findings, it can be concluded that participatory communication is able to create a more inclusive climate, but its effectiveness is highly dependent on consistency and equitable implementation across organizational units.

Resistance and Handling Strategies

Resistance to the use of artificial intelligence is still emerging, especially among staff with long work experience who feel threatened by the possibility of automation replacing their roles. These worries revolve around the loss of work autonomy, the burden of learning new technologies, to concerns about the diminishing relevance of the experiences they have built up over the years. Research has found that leaders who successfully manage resistance are those who adopt a persuasive approach, emphasize the benefits of technology, and show real support through personal mentoring and gradual adaptation programs.

A senior staff member described his concerns by saying: "*I've been used to the manual way for decades, so when AI was introduced, I felt like I had to start from scratch. There is a fear of whether I am still needed.*" (Informant S3, interview June 10, 2025). To address this, leaders try to emphasize the positive side of technology, not its threats. One of the managers stated: "*We always try to explain that AI does not replace, but supports work. With technology, staff can focus more on more important things, not just administrative routines.*" (M1 informant, June 17, 2025 interview).

A persuasive approach is also accompanied by real support in the form of mentoring. One of the unit leaders explained: "*If they only talk about benefits without accompaniment, they will still doubt. We accompany them directly, show them how the application works, until they feel comfortable.*" (Informant P1, interview June 28, 2025). These findings show that resistance is not a permanent barrier, but rather a challenge that can be managed through adaptive leadership. Leaders who prioritize persuasive communication, real support, and employee empowerment have proven to be more successful in maintaining the smooth transformation of AI-based institutions.

Differentiation of Adaptation Between Leadership Levels

The results of the analysis show a clear differentiation in adaptation strategies between leadership levels. Unit leaders (strategic level) focus more on policy formulation and strengthening long-term visions, while managers play a role in operational implementation and inter-division coordination. On the other hand, senior staff serve as a liaison between leadership policies and technical implementation in the field. This pattern shows a complementary division of roles, although in practice there is still a perception gap between the managerial level and senior staff. One leader asserted that: "*We strive to ensure that the grand vision of digitalization is understood at all levels, but the interpretation at the lower levels is often different*" (P1, interview June 12, 2025).

Meanwhile, one manager highlighted the challenges of translating policies into everyday practice: "*Sometimes strategic instructions feel too abstract, so we have to find ways to implement them in routine activities*" (M1, interview June 14, 2025). On the other hand, senior staff emphasized the importance of their position as a bridge of communication: "*We try to adapt the direction of the leadership to the technical conditions in the field, so that there is no gap between policy and the reality of work*" (S1, interview June 16, 2025). This quote illustrates that the differentiation

of leadership adaptation does provide clarity of function, but still demands harmonization between levels so that there is no gap in perception.

Impact on Organizational Readiness

This study also found that leadership adaptation makes a real contribution to organizational readiness in facing artificial intelligence-based transformation. Indications of readiness can be seen from increased employee involvement, reduced resistance, and the building of a work culture that is more open to change. However, the readiness has not been evenly distributed throughout the unit, as some parts still tend to rely on manual systems. This shows that leadership adaptation is progressive and requires long-term consistency. One of the lecturers said: "*I feel more confident trying new applications because there is support from the leadership, but my friends in other units are still hesitant*" (D1, interview June 18, 2025).

An administrative staff member also emphasized the change in attitude that occurred after more intense training and communication: "*At first we were afraid that our work would be replaced, but after participating in the mentoring, we felt more helped*" (A1, interview June 20, 2025). Meanwhile, the unit leader emphasized the need for sustainability in supporting this process: "*We cannot stop at one or two programs, organizational readiness must be maintained with continuous learning*" (P1, interview June 22, 2025). Thus, the readiness of the organization in the face of artificial intelligence-based transformation is proven to be influenced not only by technical aspects, but also greatly determined by the consistency of adaptive leadership at all levels.

DISCUSSION

The main results of this study show that leadership adaptation during artificial intelligence-based institutional transformation involves a combination of clear vision articulation, human resource capacity building, participatory communication, resistance management strategies, differentiation between leadership levels, and impact on organizational readiness. Theoretically, these findings reinforce the theory of adaptive leadership that underlines that leaders must be able to be flexible in adapting their styles and actions to changing contexts (Abdurahimova, 2025). For example, adaptive leadership theory states that effective leadership in high-tech change requires an open communication strategy, stakeholder empowerment, and capacity building. Your finding that unit leaders, managers, and senior staff have different roles (or differentiation between levels) is in line with the results of comparative studies that state that leadership adaptation is strongly influenced by local institutional and cultural structures (Ugli et al., 2024).

The meaning of each outcome is that a clear vision is not just a matter of declaration from above, but must be understood and grounded down to the level of the executive staff in order to create common ownership. This is in line with transformational leadership and participatory leadership theories that emphasize shared vision and participation as essential elements in institutional change (Mayasari et al, 2024). Human resource capacity development and technical assistance are found to be important as a bridge between vision and

practice, especially staff who do not yet have digital literacy. Digital literacy theory and technological competence support that individual readiness factors greatly determine the speed and success of change (Fernandez & Ibrahim, 2024).

The participatory communication found in your research results becomes a vital mechanism for reducing resistance and increasing a sense of meaning in change. This is consistent with the literature showing that participative leadership strengthens employees' psychological safety, trust, and engagement in the organization when they feel their voices are valued (Somech & Zhang, 2025). An open dialogue strategy, regular discussion forums, and informal communication facilitate better understanding and mitigate concerns about technological change.

Resistance arises mainly from senior staff with long work experience, who feel that changes in automation or the use of AI threaten their status or role. This difference suggests that the hypothesis that resistance can be prevented through communication and real support has proven to be largely true, but not entirely. There are structural and cultural aspects such as fear of losing relevance, or uncertainty of technical competence that requires a special approach. The theory of change management states that resistance is not only a technical but also a psychological challenge and Recent research in change management says that resistance is not only a technical challenge but also a psychological and cultural one, which must be addressed holistically (Cheraghi, 2023; Hubbart, 2023).

The differentiation of adaptation between leadership levels is an interesting finding: the strategic level is more about grand vision and policy, the middle level is more about implementation and coordination, and senior staff is a bridge. This has the implication that adaptive leadership should not be seen as monolithic, but rather as a layered system that synergizes with each other. The comparative literature on adaptive leadership involving HEIs (Higher Education Institutions) in various countries shows that the existence of organizational structures and local cultures greatly influence how this role is played (Ugli et al., 2024; Rahmat, 2022). One of the obstacles found is that the perception of the speed of change is not always in line between levels, so potential friction arises.

The impact on organizational readiness shows that leadership adaptation does not only have an impact on technical readiness, but also on psychological and cultural readiness. Successful organizations show decreased resistance, increased engagement, and a change in attitude toward technology as a partner, not a threat. However, the readiness is still unevenly distributed in several units; This indicates that change requires consistency and long-term investment. The literature on generative adoption of AI in HEI mentions that the adoption process requires iteration and reflection, and that a top-down approach alone is not enough (Dotan et al., 2024).

Regarding the factors that support the initial hypothesis: strong vision, participatory communication, and ongoing training prove to be very helpful. Conflicting or obstacle factors include low digital literacy, variations in readiness between units, and unclear practical application of vision from leadership to executive staff. The main difference with previous research is that in much of the adaptive leadership literature in the context of AI, the focus is on curriculum

transformation or the adoption of specific technologies, rather than on interlevel leadership relationships and psychological readiness in local institutions such as Riau.

The weakness in this study is that the sample is relatively small and only in one institution, so generalizations are limited. Limited data collection time may also affect the depth of the long-term implementation experience. For further research, it is recommended to expand the sample to several institutions, perhaps in different provinces, as well as add longitudinal methods to see the development of leadership adaptation over time.

Overall, this study makes a practical contribution to higher education managers who want to design adaptive leadership strategies: meaning that leaders must actively ground visions, build participatory communication, provide ongoing training, and pay attention to the readiness and perceptions of staff at each leadership level. Theoretically, this study enriches the literature on adaptive leadership in the context of AI in higher education institutions in developing countries, adding insight that adaptive leadership is not only about policy visibility, but also about harmony between levels, psychological readiness, and real implementation in work units.

CONCLUSIONS AND RECOMMENDATIONS

This research confirms that artificial intelligence-based institutional transformation requires adaptive leadership skills in dealing with structural, cultural, and operational changes in the organization. Through a qualitative case study at a university in Riau, the results of the study show that the success of leadership adaptation is greatly influenced by three main aspects. First, the leader's ability to articulate a clear and long-term vision of transformation. Second, human resource capacity development through continuous training programs that ensure employee readiness to face new technologies. Third, the implementation of effective participatory communication to reduce resistance and build a sense of shared ownership towards change.

These findings reinforce the view that leadership adaptation is not only a supporting factor, but also a strategic element that determines the sustainability of AI-based transformation. Practically, this research contributes to formulating a human resource management strategy that is more responsive to technological changes, emphasizing the importance of vision, capacity building, and collaborative communication. Theoretically, this study enriches the study of adaptive leadership in the digital age by providing empirical evidence from the context of higher education in Indonesia, which is relevant to be integrated into the global literature on leadership in technology-based institutional transformation.

FURTHER STUDY

Future research could further explore how different leadership styles influence the success of AI-based institutional transformation across various organizational contexts, such as government agencies, private sectors, or non-profit institutions. Comparative and longitudinal studies would be valuable to understand how adaptive leadership evolves over time and responds to

continuous technological advancements. Additionally, integrating quantitative approaches could help measure the impact of specific leadership practices on organizational performance, employee engagement, and innovation outcomes. Exploring the role of organizational culture, ethical considerations, and policy frameworks in shaping leadership adaptation would also provide deeper insights and contribute to developing more comprehensive models for leading digital transformation in the AI era.

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