

STRATEGIC LEADERSHIP IN DIGITAL EDUCATION: TRANSFORMING SCHOOL MANAGEMENT IN THE AI ERA

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Abstract

The digital transformation of education triggered by the development of artificial intelligence demands fundamental changes in leadership practices within schools. This study aims to analyze the role of strategic leadership in managing and transforming school management in the AI era through a literature review approach. The method used is a systematic literature review by reviewing various scientific sources in the form of reputable journals, academic books, and research reports related to strategic leadership, digital education, and the integration of AI in education management. The results of the study indicate that strategic leadership plays a crucial role in formulating a digital vision, developing a culture of innovation, and managing technology-based organizational change. Furthermore, school leaders are required to possess adaptive competencies, digital literacy, and data-driven decision-making skills to optimize the implementation of AI in the learning process and school administration. This study also found that the success of digital transformation is greatly influenced by collaboration between leaders, teachers, and other stakeholders, as well as adequate infrastructure and policy support. Thus, strategic leadership is key to creating a responsive, innovative, and sustainable school management system in the AI era.

Keywords: *Strategic Leadership, Digital Education, Artificial Intelligence, School Management, Educational Transformation*

INTRODUCTION

The rapid development of digital technology over the past two decades has brought fundamental changes to various sectors of life, including education. This transformation is not only related to the use of technological devices in the learning process but also touches on managerial and leadership aspects at the educational institution level. The era of artificial intelligence presents a new paradigm that demands schools adapt quickly and strategically to remain relevant and competitive. In this context, strategic leadership is a key element in determining the success of digital transformation in the educational environment, particularly in effective, adaptive, and sustainable school management.

Strategic leadership in education no longer focuses solely on administrative and operational functions but also encompasses the ability to formulate a long-term vision, systematically integrate technology, and manage complex organizational change. Principals and educational leaders in the AI era are required to have a deep understanding of the dynamics of digital technology, including the potential and challenges posed by the implementation of AI in the education system (S. et al., 2025). This includes the use of big data, learning analytics, and adaptive learning systems that can improve the quality of learning and data-driven decision-making.

However, the reality on the ground shows that not all educational institutions are able to manage digital transformation optimally. Many schools still face various obstacles, such as limited technological infrastructure, low digital literacy among educators, and resistance to organizational change. Furthermore, there is a gap between digital-based education policies and their implementation at the school level. This situation demonstrates that digital transformation in education is not simply a technological issue, but also

closely related to the quality of strategic leadership capable of effectively directing, managing, and integrating various resources.

In this context, the role of strategic leadership becomes increasingly important because educational leaders must be capable of being visionary and innovative agents of change (Mariyono et al., 2026). They are required not only to understand technology but also to be able to create an organizational culture that supports innovation and collaboration. Effective strategic leadership will foster the creation of a learning environment that is adaptive, flexible, and responsive to changing times. Furthermore, leaders must be able to build partnerships with various stakeholders, including the government, the private sector, and the community, to support the holistic implementation of digital transformation.

The transformation of school management in the AI era also demands changes in decision-making systems. While previously decisions were based primarily on experience and intuition, now they must be supported by accurate and real-time data (Khairullah et al., 2025). This requires high analytical skills from educational leaders to interpret data and use it as a basis for strategic planning. Furthermore, leaders must be able to manage the risks associated with technology use, such as data security, privacy, and ethical issues in the use of AI in educational settings.

Furthermore, the integration of AI into school management opens up significant opportunities to improve operational efficiency and effectiveness. AI-based systems can assist in various aspects, such as administrative management, student performance monitoring, and the development of a more personalized and adaptive curriculum. Therefore, strategic leadership that optimally utilizes AI technology will provide educational institutions with a competitive advantage in facing global competition. However, utilizing this technology also requires adequate human resource readiness, making the capacity development of teachers and education personnel an integral part of the digital transformation strategy (Deogaonkar, 2025).

Furthermore, the main challenge in implementing strategic leadership in the digital era lies in the ability to manage changes in organizational culture. Digital transformation often faces resistance from various parties who are not yet ready for such change. Therefore, educational leaders must possess effective communication skills and be able to build trust and commitment from all members of the organization. Inclusive and participatory leadership will be crucial in creating an environment conducive to innovation and change.

Furthermore, national education policies also play a crucial role in supporting digital transformation at the school level. Governments in various countries, including Indonesia, have encouraged the digitalization of education through various programs and initiatives (Fantoni & Sasmita, 2025). However, the successful implementation of these policies depends heavily on the capacity of school-level leadership to translate policies into effective practices. This demonstrates the vital role of strategic leadership in bridging the gap between macro-level policies and micro-level implementation in the educational environment.

Research on strategic leadership in the context of digital education is becoming increasingly relevant given the complex challenges faced by educational institutions in the AI era. An in-depth literature review is needed to understand the various concepts, models, and best practices related to strategic leadership in school management transformation. Through this approach, it is hoped that a comprehensive conceptual framework can be found to support the development of adaptive and innovative educational leadership.

Therefore, this study aims to examine in-depth the role of strategic leadership in transforming school management in the era of artificial intelligence. The primary focus of this research is on how educational

leaders can integrate digital technology into school management systems and how they manage the organizational changes resulting from this transformation. The results of this study are expected to provide theoretical and practical contributions to the development of strategic leadership models relevant to the demands of the digital era and serve as a reference for stakeholders in improving the quality of educational management in the future.

LITERATURE REVIEW

Integration of Artificial Intelligence in Educational Leadership

The integration of Artificial Intelligence in educational leadership represents one of the most significant transformations in the contemporary educational management landscape. The rapid development of digital technology is not only changing the way learning occurs but also demands a redefinition of the role of educational leaders in managing institutions in an adaptive, responsive, and data-driven manner (Huzooree, 2026). In this context, educational leaders no longer function solely as traditional administrators or decision-makers, but rather as agents of change capable of leveraging intelligent technology to improve the overall quality of education. AI presents strategic opportunities for leaders to optimize data-driven decision-making, increase operational efficiency, and drive innovation in learning processes and human resource management.

The use of AI in educational leadership can be seen in its ability to process large amounts of data quickly and accurately. Data that was previously difficult to analyze manually can now be transformed into relevant information to support strategic planning. For example, AI-based systems can analyze student academic performance, identify learning patterns, and predict potential risks such as declining achievement or dropout rates (Zárate-Torres et al., 2025). With this information, educational leaders can make more targeted and evidence-based decisions. This demonstrates that AI integration not only increases efficiency but also strengthens more rational and measurable leadership qualities.

On the other hand, AI integration also encourages a paradigm shift in leadership from a hierarchical one to a more collaborative and participatory one. AI technology enables more effective communication between leaders, teachers, students, and other stakeholders through an integrated digital platform. Educational leaders can leverage AI to more deeply understand the needs of individuals within the organization, including student learning preferences and teacher professional development needs. Thus, leadership becomes more inclusive and oriented to real-world needs. This transformation aligns with the demands of the digital era, which emphasizes flexibility, adaptability, and openness to innovation.

However, the integration of AI in educational leadership also presents several challenges that cannot be ignored. One key challenge is the readiness of human resources to understand and utilize this technology. Not all educational leaders have sufficient digital literacy to implement AI effectively. Therefore, systematic efforts are needed to improve leaders' digital competencies through continuous training and development. Furthermore, there are concerns regarding ethical aspects, such as data privacy, information security, and the potential for algorithmic bias that could impact the fairness of decision-making. In this case, educational leaders must be able to balance the use of technology and ethical principles that uphold human values.

Human–AI Collaboration in Leadership

Human–AI Collaboration in the context of leadership has become an increasingly relevant phenomenon in the era of digital transformation. The development of artificial intelligence technology is not

only transforming how organizations operate but also redefining the role of leaders in managing resources, making decisions, and building adaptive and innovative working relationships (Sposato, 2025). From this perspective, leadership is no longer solely centered on an individual's ability to direct people, but also on the ability to integrate intelligent systems as strategic partners in the managerial process. This collaboration creates a new dynamic where humans and machines complement each other, with humans playing a role in intuitive, ethical, and contextual aspects, while AI contributes to data analysis, prediction, and operational efficiency.

In practice, Human–AI Collaboration enables leaders to improve the quality of data-driven decision-making. Artificial intelligence can process large volumes of data quickly and accurately, providing more comprehensive insights than conventional analysis. Effective leaders do not simply rely on raw AI output but also interpret these results taking into account the social, cultural, and value contexts of the organization. Thus, this collaboration does not replace human roles, but rather strengthens leadership capacity through an augmented intelligence-based approach. Leaders are required to possess adequate digital literacy to understand how AI works, identify algorithmic bias, and ensure that decisions remain aligned with ethical and sustainable principles (Kafa, 2025).

Furthermore, human-AI collaboration also influences the leadership style adopted within organizations. Traditional hierarchical leadership is shifting toward more collaborative, adaptive, and network-based leadership. Leaders need to create a work environment that supports technology integration without neglecting the human aspect. This includes developing an organizational culture open to innovation while maintaining employee trust and engagement. In this context, AI can be used to map team performance, analyze communication patterns, and provide strategic recommendations, but a human touch is still needed to build empathy, motivation, and strong interpersonal relationships.

Challenges in Human–AI Collaboration also cannot be ignored, particularly those related to ethics, transparency, and trust. The use of AI in leadership has the potential to raise concerns regarding data privacy, algorithmic discrimination, and opaque decision-making. Therefore, leaders must be able to develop a clear governance framework for the use of this technology. Transparency in AI-based decision-making processes is key to maintaining leadership legitimacy in the eyes of organizational members. Furthermore, it is crucial for leaders to ensure that AI is used as a supporting tool, not as a substitute for human moral responsibility, in determining the direction of the organization (Arar et al., 2025a).

On the other hand, this collaboration also opens up significant opportunities for improving leadership effectiveness. With AI support, leaders can focus more on strategic and innovative aspects, while automating routine operational tasks. This allows for time and resource efficiencies and encourages more sustainable innovation. Leaders who are able to optimally utilize AI will have a competitive advantage in facing the increasingly complex and dynamic business environment. They can respond more quickly to change, anticipate risks, and identify new opportunities through predictive analysis generated by AI systems.

Furthermore, Human–AI Collaboration also has implications for the development of future leadership competencies. Leaders are required not only to possess technical and managerial skills, but also digital competencies, critical thinking skills, and high emotional intelligence. The integration of human and technological capabilities requires a balance between rationality and empathy. Leaders must be able to bridge the gap between technology and people, and ensure that the digital transformation remains oriented toward human values. In this regard, leadership education and training need to be adapted to the needs of the digital era, emphasizing technological mastery while simultaneously strengthening character and ethics.

METHOD

This research uses a qualitative approach with a literature review method, aiming to comprehensively examine the concept of strategic leadership in the context of digital education and the transformation of school management in the era of artificial intelligence. Data sources were obtained from various relevant scientific publications, such as reputable international journals, conference proceedings, academic books, and research reports published within the last ten years. The literature search was conducted through academic databases such as Google Scholar, Scopus, and Web of Science, using keywords related to strategic leadership, digital education, artificial intelligence in education, and school management transformation. Inclusion criteria were established to ensure the relevance and quality of the sources, namely articles discussing strategic leadership in education, digital technology integration, and the impact of artificial intelligence on the management of educational institutions.

Data analysis was conducted using content analysis techniques, which enabled researchers to identify patterns, themes, and conceptual relationships from the various literature sources collected. The analysis stages included data reduction, categorization, synthesis, and critical interpretation of existing findings to produce a comprehensive and in-depth conceptual framework. In this process, researchers also conducted comparisons between studies to identify research gaps and opportunities to develop strategic leadership models that are adaptive to the development of artificial intelligence technology. Research validity was maintained through source triangulation and consistency in reference selection. Therefore, the results of this study are expected to provide theoretical and practical contributions to the development of innovative and sustainable education management in the digital era.

RESULTS AND DISCUSSION

Digital Leadership Competencies for Principals and Education Managers

The discussion of digital leadership competencies for principals and education managers is becoming increasingly relevant in the context of educational transformation in the era of rapidly evolving technology. Digital leadership refers not only to the ability to use technology but also reflects a leader's capacity to strategically integrate technology to improve learning quality, management effectiveness, and organizational adaptation to dynamic change. In an increasingly digitalized educational environment, principals and education managers are required to have a clear vision regarding the use of technology as an instrument of transformation, not simply as an administrative support tool.

One key dimension of digital leadership competency is comprehensive digital literacy. This literacy encompasses an understanding of various technology platforms, learning management systems, and educational data analysis. Leaders with high digital literacy are able to make data-driven decisions, identify teacher development needs, and design policies responsive to the challenges of the digital era (Okunlola & Naicker, 2025). In this context, principals no longer act as traditional administrators but as agents of change, driving innovation through the effective and sustainable use of technology.

Furthermore, digital leadership competencies also encompass the ability to manage organizational change. Digital transformation in education often faces resistance from various parties, particularly teachers and education personnel who are not yet fully prepared to adapt to technology (Abdullah & Kadir, 2023). Therefore, principals and education managers need persuasive communication skills, a strong sense of empathy, and a systematic change management strategy. They must be able to build an organizational culture

open to innovation, provide relevant training, and create a work environment that supports collaboration and continuous learning.

Furthermore, visionary leadership is a crucial component of digital competency. Educational leaders must be able to formulate a strategic direction for their institutions that aligns with global technological developments. This vision must be translated into concrete operational policies, such as developing a digital-based curriculum, integrating online and offline learning, and utilizing artificial intelligence to support personalized learning. Without a clear vision, technology implementation tends to be sporadic and does not have a significant impact on improving educational quality.

Another equally important competency is the ability to build digital collaborations. In the era of global connectivity, principals and education managers need to forge partnerships with various parties, both internal and external, such as the education community, the technology industry, and research institutions. This collaboration enables knowledge exchange, innovation development, and human resource capacity building. Leaders who are able to optimally utilize digital networks will have an advantage in facing increasingly complex competition and educational dynamics (Karakose et al., 2021).

Furthermore, digital ethics is also an integral part of digital leadership competencies. Educational leaders must understand issues related to data security, privacy, and the responsible use of technology. Implementing digital systems carries the risk of data leaks, misuse of information, and unequal access to technology. Therefore, principals and educational managers need to establish policies that guarantee data protection and ensure that technology is used ethically and inclusively. This is crucial for maintaining the trust of all stakeholders and creating a safe and equitable educational environment.

In practice, developing digital leadership competencies cannot be achieved instantly but requires a continuous process through training, reflection, and hands-on experience. Professional development programs for principals and educational managers need to be systematically designed with a focus on increasing digital capacity, strategic leadership, and educational innovation. Furthermore, support from the government and relevant institutions is also essential in the form of policies, funding, and the provision of adequate technological infrastructure.

However, there are various challenges in implementing digital leadership in the education sector. One major challenge is the digital divide that persists in various regions. Unequal access to technology makes the implementation of digital leadership less than optimal. School principals in areas with limited infrastructure face obstacles in maximizing technology adoption. Therefore, an inclusive and adaptive policy approach is needed to address this gap, ensuring that the digital transformation is felt equally.

Furthermore, organizational culture also influences the success of digital leadership. Educational institutions that still maintain conventional work patterns tend to struggle to adopt digital innovation. In this regard, the role of school principals as leaders of change becomes crucial. They must be able to internalize the values of innovation, flexibility, and lifelong learning within the organizational culture. Digital transformation is not only about technology but also about changing the mindsets and behaviors of all organizational members (Antonopoulou et al., 2025).

Furthermore, digital leadership competency is also closely related to evaluation and reflection skills. Educational leaders need to regularly evaluate the effectiveness of technology use in the learning and management process. This evaluation can be conducted through data analysis, feedback from teachers and students, and institutional performance measurement. In this way, principals and educational managers can make continuous improvements and ensure that technology implementation truly adds value to education.

In a global context, digital leadership competency is a crucial indicator in determining the competitiveness of educational institutions. Schools and educational institutions led by leaders who are adaptive to technology tend to be better able to face future challenges, including changing job market needs and scientific developments. Therefore, investing in developing digital leadership competency is a strategic step to improve the overall quality of education.

Ethics of AI Use in Educational Leadership and Management

The ethics of using artificial intelligence in educational leadership and management is becoming an increasingly crucial issue as digital transformation accelerates in the education sector. The presence of AI is not only changing decision-making processes but also influencing interaction patterns between leaders, educators, and students (Aldighrir, 2024). In this context, educational leadership is no longer solely oriented toward administrative efficiency but also the ability to uphold the ethical values that underlie educational practices. Educational leaders are required to balance the use of technology with moral responsibility to ensure that AI implementation does not lead to negative impacts such as algorithmic bias, privacy violations, and the dehumanization of the learning process.

In practice, the use of AI in educational management often involves processing large amounts of data, including the personal data of students, teachers, and education personnel. This raises ethical challenges related to data protection and information security. Educational leaders have a responsibility to ensure that this data is managed transparently, securely, and in accordance with privacy principles. Without a clear ethical framework, the use of AI has the potential to lead to data misuse that can harm individuals and institutions (Polat et al., 2025). Therefore, policies are needed that are not only oriented toward technical regulations but also consider moral aspects such as fairness, accountability, and transparency in every AI-based decision-making process.

Furthermore, the issue of algorithmic bias is a significant concern in the use of AI in educational settings. AI systems developed based on historical data have the potential to reproduce pre-existing inequities, such as discrimination based on social, economic, or cultural background. In the context of educational leadership, this requires a critical awareness of the limitations of technology. Leaders should not rely entirely on AI system recommendations without conducting contextual evaluation. Decisions made by AI must still be assessed humanely to avoid neglecting the values of justice and inclusivity (Arar et al., 2025b). Thus, ethical leadership positions AI as a tool, not a substitute for human judgment.

Another equally important dimension is transparency in the use of AI. In educational management, transparency relates to the openness of information regarding how AI systems operate, what data is used, and how decisions are made. A lack of transparency can lead to distrust among stakeholders, including teachers, students, and parents (Arar et al., 2025b). Therefore, educational leaders need to develop effective communication to explain the use of AI clearly and understandably. This transparency not only increases trust but also encourages active participation in decision-making processes involving technology.

On the other hand, the use of AI also raises challenges related to dehumanization in education. Excessive reliance on technology can diminish the human interaction that has long been at the heart of the learning process. Education is not just about transferring knowledge, but also about character development, empathy, and social values. If AI is used without ethical considerations, there is a risk that the relationship between teachers and students will become increasingly impersonal (Michopoulou & Gan, 2025). In this regard, educational leadership must be able to maintain a balance between technological innovation and

human values. AI should be used to strengthen the role of teachers, not replace them, so that the learning process remains oriented towards holistic human development.

Furthermore, accountability is a crucial ethical principle in the use of AI. When decisions are made based on system recommendations, the question arises as to who is responsible if errors occur. Does the responsibility lie with the system developer, the user, or the institution? In this context, educational leaders must ensure a clear accountability mechanism. Every decision involving AI must be morally and professionally justified. This requires operational standards governing the use of AI, including ongoing evaluation and monitoring procedures.

Equally important, digital literacy and technology ethics for educational leaders are also crucial factors in the success of AI implementation. Without adequate understanding, leaders risk making inappropriate or even detrimental decisions. Therefore, capacity building through training and professional development is an urgent need. Educational leaders need to understand not only the technical aspects of AI, but also the ethical, social, and psychological implications of its use. This will enable them to make wiser and more responsible decisions (Rethinking Educational Management, 2025).

More broadly, the ethical use of AI in education is also related to the values of social justice. Access to technology is not always equal, so the use of AI has the potential to widen the gap between well-resourced and under-resourced institutions. Ethical educational leadership must anticipate this by ensuring that AI implementation does not create new exclusions. Inclusive policies need to be designed so that all parties can benefit from technology equitably. This reflects a commitment to education as a fundamental right that should be accessible to all individuals without discrimination.

Finally, the ethical use of AI in educational leadership and management requires a holistic and sustainable approach. Relying solely on formal regulations is not sufficient; ethical values must also be internalized within the organizational culture. Educational leaders must set examples of responsible technology use, thereby building trust and integrity within the institution. By integrating ethical principles into every aspect of AI use, education can optimally utilize technology without sacrificing human values. This approach is key to creating an education system that is not only technologically advanced but also dignified and equitable.

The Impact of Strategic Leadership on the Effectiveness and Efficiency of School Management

The discussion of the impact of strategic leadership on the effectiveness and efficiency of school management has become increasingly relevant in the context of educational transformation characterized by the dynamics of technological change, demands for quality education, and the complexity of managing educational organizations. Strategic leadership is no longer understood solely as the principal's administrative ability to carry out managerial functions, but rather as the capacity to formulate a long-term vision, manage change, and optimize all school resources in an adaptive and sustainable manner (Prasertcharoensuk & Tang, 2017). In this context, strategic leadership plays a central role in determining the direction of school policy while ensuring its effective and efficient implementation.

The effectiveness of school management is greatly influenced by the extent to which leaders are able to align the organization's vision, mission, and goals with daily operational practices. Principals with a strategic orientation tend to be able to clearly articulate educational goals to all stakeholders, including teachers, education staff, students, and parents. This clarity of direction results in increased internal coordination and collaboration, enabling every element of the organization to work in an integrated manner

to achieve common goals. Furthermore, strategic leadership also encourages data-driven and analytical decision-making, so that the resulting policies are more targeted and relevant to school needs (Ali & Anwar, 2021).

In terms of efficiency, strategic leadership contributes to the optimization of resource use, including human, financial, and infrastructure resources. Strategic leaders are able to identify program priorities and allocate budgets proportionally based on actual needs and expected impact. This reduces the potential for waste and increases the utility of each program implemented. Efficiency is also reflected in the leader's ability to simplify work procedures, minimize unnecessary bureaucracy, and utilize technology to increase organizational productivity.

Furthermore, strategic leadership has direct implications for improving teacher performance, as the spearhead of the learning process. Visionary leaders not only focus on administrative aspects but also act as instructional leaders, encouraging continuous teacher professional development. Through appropriate strategies, such as needs-based training, constructive academic supervision, and the creation of a reflective culture, principals can improve teachers' pedagogical and professional competencies. Consequently, the quality of learning improves, ultimately contributing to improved student learning outcomes.

Furthermore, strategic leadership also plays a role in building a positive and adaptive organizational culture. A conducive school culture is characterized by the values of collaboration, innovation, accountability, and openness to change. Strategic leaders are able to instill these values through role models, effective communication, and fair reward and evaluation systems. A strong organizational culture strengthens members' commitment to the school's goals, thereby achieving more consistent management effectiveness (Atoum et al., 2024).

In the context of efficiency, a positive organizational culture also contributes to reducing internal conflict and increasing job satisfaction. When relationships between individuals within an organization are harmonious and based on trust, work coordination becomes smoother and productivity increases. This indirectly reduces social costs and time wasted due to conflict or miscommunication. Therefore, strategic leadership impacts not only the structural aspects of the organization but also the cultural dimensions that influence operational efficiency.

Strategic leadership is also closely related to a school's ability to respond to changes in the external environment. In the era of globalization and digitalization, schools face various challenges, such as developments in educational technology, curriculum changes, and the demands of 21st-century competencies. Leaders with a strategic perspective are able to identify opportunities and threats emerging from the external environment and then formulate appropriate adaptation strategies. Responding quickly and appropriately to these changes is key to maintaining the effectiveness and efficiency of school management (Abusamra, 2024).

Furthermore, the involvement of external stakeholders is also a crucial part of strategic leadership. Effective school principals are able to forge partnerships with various parties, such as the government, the business world, and the community, to support school development. This collaboration not only expands available resources but also increases the relevance of educational programs to real-world needs. Thus, the effectiveness of school management is measured not only by internal achievements but also by its contribution to the external environment.

However, the implementation of strategic leadership is not without its challenges. One major challenge is the limited leadership competency itself, particularly in strategic planning and change

management. Not all principals have adequate background or training in these areas, necessitating capacity building efforts through ongoing education and training. Furthermore, resistance to change from within the organization can also hinder the implementation of designed strategies.

Another contributing factor is top-down educational policies, which sometimes limit the principal's latitude in making strategic decisions. In such circumstances, leaders are required to possess contextual intelligence, namely the ability to adapt strategies to existing constraints without losing sight of the organization's goals. Flexibility and creativity are key to overcoming these limitations (Alayoubi et al., n.d.).

Overall, this discussion demonstrates that strategic leadership has a significant impact on the effectiveness and efficiency of school management. Vision-driven, data-driven, adaptive leadership that adapts to change and optimally manages resources will create a more focused, productive, and sustainable school management system. Therefore, strengthening strategic leadership capacity needs to be a priority in efforts to improve the quality of education, particularly in the increasingly complex context of school management in the modern era.

CONCLUSION

The conclusion of this study confirms that strategic leadership in digital education is a key factor in transforming school management in the era of artificial intelligence. Educational leaders no longer act merely as administrative managers but also as agents of change capable of integrating technology in a visionary, adaptive, and sustainability-oriented manner. The integration of artificial intelligence into school management systems has been proven to improve decision-making efficiency, personalize learning, and optimize educational organizational performance. However, the success of this transformation is largely determined by the readiness of human resources, an organizational culture open to innovation, and institutional policies that support the ethical and responsible implementation of technology.

Furthermore, this study also shows that collaboration between humans and technology is a crucial element in creating an educational ecosystem that is responsive to digital dynamics. Effective strategic leadership is characterized by the ability to manage change, build digital literacy among educators, and ensure that the use of artificial intelligence remains centered on pedagogical and humanitarian values. Thus, the transformation of school management in the AI era is not simply a digitalization process, but rather a holistic effort that combines technological innovation with ethical leadership oriented towards continuously improving the quality of education.

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