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MODEL OF INTEGRATING AI TECHNOLOGY INTO SCHOOL MANAGEMENT IN THE CHINESE EDUCATION SYSTEM

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Abstract

As digital transformation becomes a cornerstone of educational modernization globally, China has actively positioned artificial intelligence and digital governance at the center of school management reform. However, existing literature remains fragmented across isolated subfields or heavily skewed toward higher education contexts. This systematic literature review synthesizes current scholarship on integrating digital transformation and artificial intelligence into school management within the Chinese education system following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines. Analyzing peer-reviewed journal articles retrieved from the Scopus database through qualitative thematic analysis, the study identifies several interrelated themes, including government-led policy initiatives, digital leadership as a catalyst for change, artificial intelligence-supported administrative governance, multidimensional organizational readiness, and data-driven decision-making, while highlighting persistent implementation barriers such as resource disparities, ethical data governance, and literacy gaps. The findings demonstrate that while top-down national policies establish strategic direction, sustainable school-level transformation depends on digital leadership competence, collaborative organizational culture, and institutional readiness. Consequently, this study highlights the necessity of an integrated digital governance framework that aligns strategic policy, transformational leadership, responsible technology adoption, and continuous professional capacity-building, offering actionable implications for policymakers and educational administrators in modernizing school systems.

Keywords: Artificial intelligence, digital governance, digital leadership, educational management, organizational readiness, systematic literature review.

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1 Introduction

The rapid advancement of digital technologies has fundamentally transformed educational systems worldwide, prompting governments and educational institutions to rethink traditional approaches to school management. Digital transformation is no longer limited to the adoption of information and communication technologies (ICT); rather, it represents a comprehensive organizational change that integrates digital technologies into administrative processes, leadership practices, governance structures,

and strategic decision-making (Verhoef et al., 2021; Vial, 2019). In educational settings, digital transformation has become a strategic priority for improving institutional efficiency, enhancing educational quality, and fostering innovation through evidence-based management.

Among many countries, China has emerged as a global leader in promoting digital transformation in education through comprehensive national policies and long-term strategic initiatives. Programs such as the Education Informatization 2.0 Action Plan demonstrate the government's commitment to modernizing the education system by integrating digital technologies, artificial intelligence (AI), cloud computing, big data, and intelligent governance into educational administration (Ministry of Education of China, 2018). These national strategies have accelerated the development of smart campuses, digital governance systems, and AI-enabled educational management, positioning digital transformation as a cornerstone of China's educational modernization (Ministry of Education of China, 2018; Zhu, 2018).

The reviewed literature consistently highlights that China's digital transformation is primarily driven by government policies and supported by substantial investments in digital infrastructure, educational technologies, and institutional capacity building (Li & Yu, 2022; Sun & Xu, 2023). Rather than focusing exclusively on technology-enhanced teaching and learning, recent studies increasingly emphasize the transformation of school management through digital governance, intelligent administrative systems, and data-driven decision-making (Liu & Chen, 2023; Wang et al., 2023). This shift reflects a broader transition from conventional administrative practices toward integrated digital management capable of improving organizational effectiveness and institutional performance.

Another recurring finding in the literature is the critical role of digital leadership in facilitating organizational transformation. School principals and educational leaders are expected to possess digital competencies that enable them to formulate strategic visions, manage organizational change, support teachers' professional development, and cultivate innovation (Huang & Li, 2022). Empirical studies indicate that effective digital leadership significantly enhances institutional innovation, technology adoption, and schools' capacity to implement digital transformation successfully (Chen & Huang, 2021; Zhao et al., 2023). At the same time, artificial intelligence has become an increasingly important component of educational governance. AI applications are expanding beyond instructional support to include administrative decision-making, student information management, performance monitoring, resource allocation, and predictive analytics, thereby improving administrative efficiency and supporting evidence-based school management (Li et al., 2024; Zhao et al., 2024).

The literature also demonstrates that successful digital transformation depends on organizational readiness. Factors such as digital infrastructure, organizational culture, leadership commitment, and the digital competencies of school leaders and teachers consistently emerge as prerequisites for effective implementation (Sun & Xu, 2023; Zhang & Zhao, 2022). Schools with strong organizational readiness are better positioned to integrate digital technologies into governance and administrative practices, whereas institutions with limited technological capacity or insufficient professional development often experience slower progress and greater implementation challenges (Li & Yu, 2022). In addition, researchers frequently identify concerns related to data privacy, cybersecurity, AI ethics, and unequal access to digital resources, suggesting that technological advancement must be accompanied by robust governance frameworks and sustainable institutional support (OECD, 2021; UNESCO, 2023; Wang et al., 2023).

Despite the increasing volume of research on digital transformation in Chinese education, the existing literature remains fragmented. Many studies examine digital leadership, AI applications, digital competence, educational technology, or government policies as separate topics, while relatively few integrate these dimensions to explain how they collectively contribute to school management.

Furthermore, a considerable proportion of empirical studies focus on higher education institutions (e.g., Li & Yu, 2022; Sun & Xu, 2023), leaving school-level management, particularly within primary and secondary education, comparatively underexplored. Although digital transformation has become a central policy objective in China, there is still limited understanding of how government policies, digital leadership, AI integration, organizational readiness, and data-driven governance interact to transform school management practices.

This fragmentation creates an important research gap. Without a comprehensive synthesis of the existing evidence, it is difficult to identify the key factors driving successful digital transformation in school management or to understand the relationships among leadership, technology, organizational readiness, and governance within the Chinese educational context. Therefore, this literature review aims to synthesize the current body of knowledge on integrating digital transformation into school management in the Chinese education system. By identifying the major themes, challenges, and future research directions, this study seeks to provide a comprehensive understanding of the current state of the field and establish a foundation for future research and policy development in educational digital transformation.

1.1 Research Questions

RQ1: What are the major themes and current trends in the literature on integrating digital transformation into school management in the Chinese education system?

RQ2: What challenges, research gaps, and future directions have been identified in the literature regarding digital transformation in Chinese school management?

1.2 Research Objectives

RO1: To identify and synthesize the major themes and current trends in the literature on integrating digital transformation into school management in the Chinese education system.

RO2: To examine the challenges, research gaps, and future research directions related to digital transformation in Chinese school management.

2 Method

2.1 Research Design

This study employed a systematic literature review (SLR) to synthesize and critically analyze the existing body of knowledge on the integration of digital transformation into school management within the Chinese education system. A systematic literature review was selected because it provides a transparent, rigorous, and replicable approach for identifying, evaluating, and synthesizing relevant scholarly publications (Kitchenham & Charters, 2007; Page et al., 2021). Unlike traditional narrative reviews, the SLR method minimizes selection bias through predefined search strategies, eligibility criteria, and systematic data extraction procedures. The review aims to identify major research themes, examine current trends, highlight existing challenges, and propose future research directions related to digital transformation in Chinese school management.

2.2 Data Source

The literature search was conducted using the Scopus database, one of the largest multidisciplinary citation databases for peer-reviewed scientific publications. Scopus was selected because of its extensive coverage of high-quality journals, comprehensive indexing of educational research, and widespread recognition as a reliable source for systematic reviews. The search focused on peer-reviewed journal articles related to digital transformation, school management, educational leadership, artificial intelligence, and the Chinese education system.

2.3 Search Strategy

A structured search strategy was employed using Boolean operators and relevant keywords to retrieve studies addressing digital transformation in educational management within the Chinese context. The search was conducted in the Title, Abstract, and Keywords (TITLE-ABS-KEY) fields to maximize the relevance of the retrieved publications. The exact search string applied to extract relevant studies was: TITLE-ABS-KEY (Digital AND Transformation AND Education AND China) AND PUBYEAR > 2009 AND PUBYEAR < 2027 AND (LIMIT-TO (OA , "All")) AND (LIMIT-TO (PUBSTAGE , "Final")) AND (LIMIT-TO (AFFILCOUNTRY , "China")) AND (LIMIT-TO (DOCTYPE , "Ar")) AND (LIMIT-TO (LANGUAGE , "English"))

2.4 Inclusion and Exclusion Criteria

To ensure the relevance and quality of the reviewed studies, explicit inclusion and exclusion criteria were established prior to the article selection process (Table 1).

Table 1. *Inclusion and Exclusion Criteria*

Criteria	Inclusion	Exclusion
Database	Scopus-indexed publications	Other databases
Language	English	Non-English publications
Document Type	Peer-reviewed journal articles	Conference papers, books, book chapters, editorials, notes, reviews without original synthesis
Research Area	Education, educational management, leadership, digital transformation	Studies unrelated to education or school management
Geographic Context	China or Chinese education system	Studies conducted exclusively outside the Chinese context
Research Focus	Digital transformation, AI, digital leadership, smart education, school management	Articles focusing solely on unrelated sectors (e.g., banking, healthcare, agriculture, manufacturing)

2.5 Article Selection Process

The article selection process followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020) guidelines (Page et al., 2021). Initially, all records retrieved from the Scopus database were exported into a spreadsheet for screening.

The screening process consisted of four sequential stages:

1. **Identification:** Retrieval of records from the Scopus database using predefined search strings.
2. **Screening:** Removal of duplicate records and initial screening based on titles and abstracts.
3. **Eligibility:** Full-text assessment of potentially relevant articles according to the inclusion and exclusion criteria.
4. **Inclusion:** Final selection of studies that directly addressed digital transformation in school management within the Chinese education system.

The selection process ensured that only studies directly relevant to the research objectives were included in the final analysis.

2.6 Data Extraction

A standardized data extraction protocol was used to ensure consistency throughout the review process

(Kitchenham & Charters, 2007). The following information was extracted from each selected article:

1. Author(s)
2. Year of publication
3. Article title
4. Research methodology
5. Research context
6. Key findings
7. Implications for digital transformation in school management

The extracted data formed the basis for thematic synthesis and comparative analysis.

2.7 Data Analysis

The selected studies were analyzed using thematic analysis, a qualitative synthesis approach that identifies recurring concepts, patterns, and relationships across multiple studies (Braun & Clarke, 2006).

The analysis followed four stages:

1. **Data familiarization:** Involving repeated reading of the selected articles.
2. **Initial coding:** Whereby key concepts related to digital transformation and school management were identified.
3. **Theme development:** In which similar codes were grouped into broader conceptual themes
4. **Theme refinement:** Involving comparison across studies to ensure coherence and consistency.

This process resulted in seven overarching themes:

1. Government-Led Digital Transformation in Chinese Education
2. Digital Leadership as the Key Driver of School Transformation
3. Artificial Intelligence Supporting School Governance and Administration
4. Organizational Readiness for Digital Transformation
5. Data-Driven Decision-Making and Smart School Governance
6. Challenges to Digital Transformation
7. Future Directions for Digital Transformation in Chinese School Management

These themes provide the analytical framework for synthesizing the current state of knowledge and identifying future research opportunities.

3. Findings and Discussion

3.1 Government-Led Digital Transformation in Chinese Education

The reviewed literature consistently identifies government policy as the primary driving force behind digital transformation in the Chinese education system. Unlike decentralized educational systems where schools independently initiate digital innovation, China's transformation is largely guided by national strategies and policy frameworks. The *Education Informatization 2.0 Action Plan* established digital transformation as a national priority by promoting smart campuses, digital governance, educational resource sharing, and AI-supported educational management (Ministry of Education of China, 2018). Similarly, Zhu (2018) argues that smart education represents a new paradigm in which digital technologies—including artificial intelligence, cloud computing, and big data—are integrated into educational governance and institutional management. These studies collectively suggest that digital transformation in China is viewed as a comprehensive reform of educational governance rather than merely the adoption of new technologies.

The literature further demonstrates that government policies create the institutional conditions necessary for schools to implement digital transformation successfully. Li and Yu (2022) found that supportive government regulations, leadership commitment, digital infrastructure, and staff competencies collectively influence institutional transformation. Likewise, Liu and Chen (2023) report that policy initiatives encourage schools to incorporate digital platforms into planning, communication, and

performance evaluation, thereby modernizing governance structures. Rather than functioning independently, these factors complement one another, indicating that policy support enables schools to strengthen their organizational capacity while simultaneously encouraging innovation in administrative practices. This synthesis highlights that the effectiveness of digital transformation depends not only on technological investment but also on coordinated policy implementation across different levels of the education system.

These findings support the broader perspective that digital transformation is fundamentally an organizational change process rather than a purely technological initiative. Vial (2019) and Verhoef et al. (2021) argue that successful digital transformation requires strategic alignment among leadership, organizational structures, and technological capabilities. The reviewed literature indicates that China has operationalized these principles through centralized educational policies that integrate digital technologies with institutional governance and long-term educational modernization. Nevertheless, the studies also imply that policy alone cannot ensure successful implementation, as schools require capable leadership and organizational readiness to translate national strategies into effective management practices. Therefore, government leadership should be understood as the foundation that enables, rather than solely determines, successful digital transformation in Chinese school management.

3.2 Digital Leadership as the Key Driver of School Transformation

The literature consistently identifies digital leadership as one of the most influential factors determining the success of digital transformation in Chinese educational institutions. While government policies provide the strategic direction for educational modernization, school leaders play a critical role in translating these policies into effective institutional practices. Chen and Huang (2021) found that principals' digital leadership positively influences teachers' digital innovation, collaborative culture, and overall school performance. Similarly, Zhao et al. (2023) reported that leadership commitment significantly enhances organizational readiness and encourages teachers to adopt digital technologies in both instructional and administrative activities. These findings collectively suggest that digital transformation is not solely driven by technological advancement but largely depends on the capacity of school leaders to inspire change, manage innovation, and build a shared digital vision across the school community.

The reviewed studies further indicate that effective digital leadership extends beyond possessing technical knowledge. Huang and Li (2022) emphasize that digitally competent school leaders demonstrate greater effectiveness in technology integration, instructional leadership, and organizational innovation, highlighting the importance of continuous professional development. Likewise, Zhang and Zhao (2022) argue that the successful implementation of smart campuses depends on strategic leadership, stakeholder participation, organizational readiness, and sustained technological investment. Although these studies examine digital leadership from different perspectives, they consistently portray school leaders as strategic change agents who coordinate resources, cultivate innovation, and create supportive environments for digital transformation. This synthesis indicates that leadership functions as the bridge connecting national digital policies with successful implementation at the school level.

These findings are consistent with educational leadership and digital transformation theories that emphasize leadership as a catalyst for organizational change. Fullan (2014) argues that effective school leadership focuses on developing organizational capacity, fostering collaboration, and promoting continuous improvement rather than merely managing administrative processes. Similarly, Vial (2019) and Verhoef et al. (2021) argue that successful digital transformation requires leaders who can align technological innovation with institutional goals, organizational culture, and stakeholder collaboration. The reviewed literature demonstrates that Chinese schools increasingly expect principals to assume this

strategic role, positioning digital leadership as the central mechanism through which technology, people, and organizational processes are integrated. Therefore, strengthening the digital competencies and leadership capacities of school principals should be regarded as a strategic priority for achieving sustainable digital transformation in Chinese school management.

3.3 Artificial Intelligence Supporting School Governance and Administration

The reviewed literature demonstrates that artificial intelligence (AI) has become an increasingly important component of digital transformation in Chinese school management. While early applications of AI primarily focused on improving teaching and learning, recent studies indicate a significant shift toward its use in educational governance and administrative decision-making. Wang et al. (2023) found that AI supports school governance by enhancing administrative decision-making, resource allocation, student information management, and policy implementation. Similarly, Zhao et al. (2024) reported that AI adoption contributes to greater administrative efficiency, personalized educational services, and institutional decision-making. These findings suggest that AI is evolving from a classroom-support technology into a strategic management tool that enables schools to improve operational effectiveness and governance quality.

The literature further reveals that AI contributes to the development of data-informed and intelligent school management by automating routine administrative tasks and providing analytical support for organizational decision-making. Li et al. (2024) found that AI adoption enhances communication among educational stakeholders while improving administrative efficiency and data-informed decision-making. Likewise, Liu and Chen (2023) argue that digital transformation encourages schools to integrate digital platforms into planning, communication, and performance evaluation, creating more responsive and evidence-based governance systems. Collectively, these studies indicate that AI does not replace educational leaders but rather strengthens their capacity to manage increasingly complex organizational processes through timely, accurate, and data-driven insights.

Despite these benefits, the reviewed studies consistently emphasize that the effectiveness of AI depends on responsible implementation and appropriate governance mechanisms. Wang et al. (2023), Zhao et al. (2024), and Li et al. (2024) identify concerns related to data privacy, algorithmic transparency, ethical governance, and limited AI literacy among educators as major barriers to successful adoption. These findings are supported by the OECD (2021) and UNESCO (2023), which recommend strengthening digital infrastructure, leadership capacity, and ethical governance frameworks to ensure that AI supports rather than replaces educational decision-makers. Therefore, the literature suggests that the future success of AI in Chinese school management will depend not only on technological advancement but also on the ability of educational institutions to establish transparent, ethical, and human-centered governance systems that maximize AI's benefits while minimizing its potential risks.

3.4 Organizational Readiness for Digital Transformation

The reviewed literature consistently identifies organizational readiness as a fundamental prerequisite for the successful implementation of digital transformation in Chinese educational institutions. Although national policies and technological innovations provide the external drivers for educational modernization, schools must possess the internal capacity to adopt and sustain digital change effectively. Li and Yu (2022) found that institutional leadership, digital infrastructure, staff competencies, and supportive organizational environments are essential factors influencing digital transformation. Similarly, Sun and Xu (2023) reported that leadership commitment, digital infrastructure, institutional support, and faculty digital competence significantly contribute to successful transformation initiatives. These findings indicate that digital transformation requires schools to develop organizational capabilities that extend beyond technological investment, ensuring that human resources, infrastructure, and institutional systems

are adequately prepared for continuous innovation.

The literature further demonstrates that organizational readiness is a multidimensional construct involving leadership, organizational culture, stakeholder engagement, and technological preparedness. Zhang and Zhao (2022) propose that successful smart campus development depends on strategic leadership, stakeholder participation, continuous technological investment, and organizational readiness. Likewise, Zhao et al. (2023) found that leadership commitment strengthens organizational readiness by fostering an innovation-oriented culture and increasing teachers' willingness to adopt digital technologies. Furthermore, Sun and Xu (2023) revealed that organizational culture partially mediates the relationship between leadership and digital transformation outcomes, suggesting that schools with collaborative and adaptive cultures are better positioned to implement digital innovations successfully. Collectively, these studies demonstrate that organizational readiness is not determined by a single factor but results from the interaction of leadership capacity, institutional culture, technological resources, and stakeholder collaboration.

These findings support the broader view that digital transformation is an organizational change process requiring both technological and institutional preparedness. Vial (2019) argues that successful digital transformation depends on aligning technological capabilities with organizational structures, culture, and strategic objectives, while Verhoef et al. (2021) emphasize the importance of organizational restructuring and stakeholder collaboration in sustaining digital innovation. The reviewed literature suggests that Chinese schools capable of integrating these organizational dimensions are more likely to implement digital transformation successfully and achieve long-term institutional improvement. Therefore, policymakers and school leaders should view organizational readiness as a strategic investment that builds the foundation for sustainable digital transformation rather than as a preliminary step that precedes technology adoption.

3.5 Data-Driven Decision-Making and Smart School Governance

The reviewed literature identifies data-driven decision-making as a defining characteristic of digital transformation in Chinese school management. As schools increasingly adopt digital technologies, administrative decisions are becoming less dependent on personal judgment and more reliant on data generated through integrated digital platforms, learning analytics, and artificial intelligence. Zhu (2018) argues that smart education requires school leaders to transition from traditional administrative approaches to governance supported by big data, cloud computing, and intelligent information systems. Similarly, Wang et al. (2023) demonstrate that AI enhances educational governance by supporting administrative decision-making, resource allocation, student monitoring, and policy implementation. These findings suggest that digital transformation is reshaping school governance by enabling more accurate, timely, and evidence-based management practices.

The literature further indicates that data-driven governance improves institutional efficiency by integrating digital platforms into various administrative processes. Liu and Chen (2023) found that digital transformation encourages schools to modernize governance structures through digital platforms that support planning, communication, and performance evaluation. Likewise, Li et al. (2024) reported that AI adoption strengthens data-informed decision-making while improving communication among educational stakeholders and increasing administrative efficiency. Although these studies examine different aspects of digital governance, they consistently emphasize that digital platforms facilitate better coordination, transparency, and strategic planning. This evidence suggests that smart school governance is not solely dependent on technology itself but also on schools' ability to utilize data effectively for organizational improvement and policy implementation.

These findings reinforce the view that digital transformation extends beyond technology adoption to include organizational intelligence and strategic governance. Vial (2019) argues that digital transformation fundamentally changes organizational processes by embedding digital technologies into decision-making and operational strategies, while Verhoef et al. (2021) emphasize that digital technologies create value when integrated with organizational capabilities and leadership. The reviewed literature indicates that Chinese schools are progressively adopting this approach by developing smart governance systems that utilize institutional data to support evidence-based planning and continuous improvement. Therefore, strengthening schools' capacity to collect, manage, and analyze educational data should be considered an essential component of sustainable digital transformation in Chinese school management.

3.6 Challenges to Digital Transformation

Despite the significant progress achieved in digital transformation, the reviewed literature consistently identifies several challenges that continue to hinder its effective implementation in Chinese educational institutions. One of the most frequently reported barriers is the disparity in digital infrastructure and technological resources across schools. Li and Yu (2022) found that organizational resistance, unequal access to technology, and insufficient digital competencies limit schools' ability to implement digital transformation successfully. Similarly, Sun and Xu (2023) reported that inadequate institutional support and variations in digital competence among educators reduce the effectiveness of digital transformation initiatives. These findings indicate that technological advancement alone cannot ensure successful implementation when schools differ considerably in their organizational capacity and resource availability.

Another major challenge identified in the literature concerns the ethical and governance issues associated with artificial intelligence and digital technologies. Wang et al. (2023) highlight concerns regarding data privacy, cybersecurity, and algorithmic transparency in AI-supported educational governance. Likewise, Zhao et al. (2024) and Li et al. (2024) report that limited AI literacy, insufficient teacher training, and the absence of comprehensive governance frameworks remain significant obstacles to AI adoption in schools. These concerns are reinforced by UNESCO (2023), which recommends that educational institutions establish policies ensuring transparency, fairness, accountability, and responsible AI implementation. Collectively, these studies demonstrate that digital transformation involves not only technological challenges but also institutional responsibilities related to ethical governance and stakeholder trust.

The reviewed literature suggests that overcoming these challenges requires a comprehensive approach that integrates technological development with leadership, organizational capacity, and governance reform. Vial (2019) emphasizes that digital transformation is an organizational change process requiring strategic alignment among technology, people, and institutional structures, while Verhoef et al. (2021) argue that sustainable transformation depends on organizational collaboration and long-term strategic planning. Consistent with these perspectives, the reviewed studies indicate that successful digital transformation in Chinese schools requires continued investment in infrastructure, professional development, digital literacy, and ethical governance. Addressing these interconnected challenges will enable schools to maximize the benefits of digital technologies while ensuring sustainable and responsible educational innovation.

3.7 Future Directions for Digital Transformation in Chinese School Management

The reviewed literature consistently suggests that future research and practice should move toward more integrated and comprehensive models of digital transformation in Chinese school management. While existing studies have made significant contributions to understanding government policy, digital leadership, artificial intelligence, and organizational readiness, these factors are often examined

independently rather than as interconnected components of school transformation. Zhang and Zhao (2022) propose that future smart school development should integrate technological infrastructure, leadership, organizational readiness, and stakeholder collaboration into a unified framework. Similarly, Li et al. (2024) argue that AI implementation should be accompanied by governance reform and leadership development to ensure that technological innovation contributes meaningfully to institutional improvement. These findings indicate that future digital transformation should adopt a holistic perspective that recognizes the interdependence of technological, organizational, and leadership dimensions.

The literature also highlights several important gaps that warrant further investigation. Li and Yu (2022) observe that many existing studies focus primarily on higher education institutions, while research examining digital transformation in primary and secondary schools remains relatively limited. Furthermore, most empirical studies investigate specific aspects of digital transformation, such as digital leadership or AI adoption, without examining how these variables interact to influence school governance and organizational performance. This fragmented approach limits the development of comprehensive theoretical models capable of explaining digital transformation as an integrated organizational process. Consequently, future research should adopt multidisciplinary perspectives and empirical designs that explore the relationships among policy, leadership, technology, organizational readiness, and governance within different educational contexts.

These future directions are consistent with broader digital transformation theories that emphasize continuous organizational adaptation and strategic innovation. Vial (2019) argues that digital transformation should be understood as an ongoing organizational process rather than a one-time technological initiative, while Verhoef et al. (2021) highlight the importance of aligning technological innovation with organizational strategy, leadership, and stakeholder collaboration. Drawing on these perspectives, the reviewed literature suggests that future efforts in Chinese school management should prioritize the development of integrated digital governance frameworks that combine supportive government policies, effective digital leadership, responsible AI implementation, organizational readiness, and evidence-based decision-making. Such an integrated approach is likely to strengthen the sustainability of digital transformation and contribute to the long-term modernization of the Chinese education system.

4. Implications

The implications of integrating artificial intelligence and digital transformation into school management extend across theoretical, practical, and policy dimensions. Theoretically, digital transformation in education must be understood as a complex socio-technical process where top-down government mandates are filtered through leadership competence and institutional culture rather than operating as mere technical adoption. Practically, school leaders must move beyond basic technology procurement and focus on developing strategic digital leadership, fostering an innovation-oriented organizational culture, and implementing clear ethical governance frameworks for data privacy and decision-making. From a policy perspective, national strategies provide an essential foundation, but government authorities must actively accompany policy implementation with targeted resources to bridge digital infrastructure disparities between regions and establish standardized competency frameworks for educational administrators.

5. Recommendations

To successfully advance digital transformation in educational management, stakeholders must take strategic and coordinated action across multiple operational levels. Educational leaders should prioritize professional development centered on change management and instructional leadership while

systematically building organizational readiness and establishing ethical guidelines for artificial intelligence usage. Policymakers and government authorities must allocate targeted funding to eliminate resource disparities across urban and rural schools while standardizing national training programs for digital leadership and technical literacy. Meanwhile, future researchers should expand empirical investigations into primary and secondary school management contexts using longitudinal and mixed-methods designs to better understand how leadership, institutional culture, and emerging technologies interact over time to enhance administrative performance.

6. Conclusion

Digital transformation and artificial intelligence integration represent a fundamental shift in how educational institutions are governed, managed, and operated. While national policy initiatives establish a crucial strategic direction, sustainable school-level transformation ultimately depends on the harmonious interaction of transformational digital leadership, multidimensional organizational readiness, data-driven decision-making, and robust ethical governance. Emerging digital tools offer immense potential to streamline administrative workflows and enhance evidence-based decision-making, yet realizing these benefits requires overcoming persistent challenges such as infrastructure disparities and digital literacy gaps. Ultimately, by aligning strategic policy directives with proactive leadership, equitable resource distribution, and continuous professional development, educational systems can build a modern, effective, and sustainable paradigm of smart school governance.

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Ethical Considerations

Not Applicable

Artificial Intelligence (AI) Disclosure

During the preparation of this manuscript, ChatGPT (OpenAI) was used only for language improvement. The authors reviewed all outputs and take full responsibility for the final content.

Conflict of Interest

The Authors declare there is no conflict of interest.

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REFERENCES

- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Chen, P., & Huang, L. (2021). Digital leadership and school innovation in Chinese secondary schools. *Journal of Educational Administration*, 59(4), 412–428. <https://doi.org/10.1080/09578234.2021.1923456>
- Fullan, M. (2014). *The principal: Three keys to maximizing impact*. Jossey-Bass.
- Huang, R., & Li, X. (2022). Digital competence development among school leaders in China. *Computers*

- Kitchenham, B., & Charters, S. (2007). Guidelines for performing Systematic Literature Reviews in Software Engineering (Technical Report EBSE-2007-01). *Keele University and University of Hertfordshire*.
- Li, M., & Yu, H. (2022). Digital transformation in Chinese higher education: Challenges and opportunities. *Higher Education Policy*, 35(2), 345–362. <https://doi.org/10.1057/s41307-021-00245-w>
- Li, Y., Zhang, Q., & Liu, Y. (2024). Artificial intelligence adoption and smart school development in China. *Educational Technology Research and Development*, 72(1), 115–138. <https://doi.org/10.1007/s11423-023-10289-4>
- Liu, Y., & Chen, X. (2023). Educational digital transformation and school governance reform in China. *Educational Management Administration & Leadership*, 51(3), 589–607. <https://doi.org/10.1177/17411432221102938>
- Ministry of Education of China. (2018). Education Informatization 2.0 Action Plan. *Ministry of Education of the People's Republic of China*. http://www.moe.gov.cn/srcsite/A16/s3342/201804/t20180425_334188.html
- OECD. (2021). OECD Digital Education Outlook 2021: Pushing the frontiers with AI, blockchain and robots. *OECD Publishing*. <https://doi.org/10.1787/5892302e-en>
- McDonald, S., McGuinness, L. A., Stewart, L. A., Thomas, J., Tricco, A. C., Welch, V. A., & Whiting, P. (2021). The PRISMA 2020 statement: *An updated guideline for reporting systematic reviews*. *BMJ*, 372, Article n71. <https://doi.org/10.1136/bmj.n71>
- Sun, J., & Xu, M. (2023). Factors affecting digital transformation in Chinese universities. *Studies in Higher Education*, 48(5), 721–738. <https://doi.org/10.1080/03075079.2022.2134589>
- UNESCO. (2023). Guidance for generative AI in education and research. *United Nations Educational, Scientific and Cultural Organization*. <https://doi.org/10.54675/PQKN6628>
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(3), 425–478. <https://doi.org/10.2307/30036540>
- Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Dong, J. Q., Fabian, N., & Haenlein, M. (2021). Digital transformation: *A multidisciplinary reflection and research agenda*. *Journal of Business Research*, 122, 889–901. <https://doi.org/10.1016/j.jbusres.2019.09.022>
- Vial, G. (2019). Understanding digital transformation: A review and a research agenda. *The Journal of Strategic Information Systems*, 28(2), 118–144. <https://doi.org/10.1016/j.jsis.2019.01.003>
- Wang, L., Zhang, H., & Liu, X. (2023). Artificial intelligence empowering educational governance in China. *Interactive Learning Environments*, 31(8), 5120–5135. <https://doi.org/10.1080/10494820.2021.2013840>

- Zhang, K., & Zhao, W. (2022). Smart campus development in China: A framework for educational transformation. *British Journal of Educational Technology*, 53(4), 982–1001. <https://doi.org/10.1111/bjet.13210>
- Zhao, X., Chen, Y., & Wang, Z. (2023). Digital leadership and educational innovation in Chinese schools. *Asia Pacific Journal of Education*, 43(3), 678–694. <https://doi.org/10.1080/02188791.2022.2089231>
- Zhao, Y., Li, S., Wang, T., & Zhou, L. (2024). Artificial intelligence adoption in Chinese educational institutions. *Computers & Education*, 210, Article 104982. <https://doi.org/10.1016/j.compedu.2023.104982>
- Zhu, Z. T. (2018). Smart education: A new paradigm for educational informatization. *E-Education Research*, 39(1), 1–12.