

DIGITAL ACADEMIC LEADERSHIP FOR CHINESE HIGHER EDUCATION

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ABSTRACT

This paper discusses the development of digital academic leadership for higher education innovation management in the digital age. It explains its concepts and theoretical foundations from the perspectives of educational administration, higher education administration, digital transformation, and innovation management. It also analyzes its role in strategic capability, organizational change, digital governance, and sustainable innovation management. The development of digital academic leadership shows several trends, such as the transformation of higher education leadership structures, stronger cross-cultural features, the transformation of digital governance systems, and the reorganization of academic administration and innovation management structures. In the development of digital academic leadership, Chinese higher education still faces problems such as the limitations of traditional academic leadership, digital fragmentation, organizational resistance, insufficient data sharing, and weak cross-departmental coordination. To improve digital academic leadership capacity, universities need to strengthen digital leadership training, improve digital governance systems, build an organizational culture that supports openness, cooperation, and exploration, and establish collaborative and data-informed innovation management systems. Digital academic leadership can support higher education governance modernization, improve organizational adaptability, promote evidence-based decision-making, and strengthen sustainable innovation development.

Keywords: Digital Academic Leadership; Higher education Innovation Management; Higher Education Administration

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INTRODUCTION

The digital age has brought major changes to higher education administration. Universities now face higher demands for strategic governance, technological adaptation, organizational coordination, and innovation-oriented development. Educational administration has moved beyond daily institutional operation. It is closely related to leadership, institutional values, planning, coordination, and continuous improvement. Bush (2020) and Hoye and Miskel (2003) emphasized that educational administration should serve educational purposes. Higher education institutions need to balance academic autonomy, public accountability, digital governance, and innovation-driven development. Higher education administration is also influenced by changes in policy, society, and technology. Huisman (2009) pointed out that higher education governance depends on coordination among governments, universities, and other stakeholders. Dobbins et al. (2011) further argued that higher education governance is influenced by the relationship among the state, the market, and academia. These views show that higher education administration should support institutional adaptation and long-term development. Zhu and Caliskan (2022) noted that universities around the world face pressures from globalization, massification, digitalization, and uncertainty. These pressures require universities to improve organizational capacity, technological readiness, and institutional resilience. Digital transformation has become an important force reshaping higher education administration. It changes teaching, research, management, evaluation, and institutional services through digital platforms, data systems, artificial intelligence, and technology-supported governance. Liu (2025) argued that digital transformation is reshaping leadership and governance in higher education and requires universities to develop more adaptive administrative systems. Zhang (2025) also pointed out that digital transformation should be understood as systematic reform across teaching, management, evaluation, and service. Therefore, digital transformation moves higher education administration from traditional management toward strategic, data-informed, collaborative, and innovation-oriented governance. Innovation management has also become central to higher education development. Innovation in higher education now extends to administrative reform, organizational renewal, resource coordination, external cooperation, and sustainable institutional improvement. Monticelli et al. (2024) argued that an innovative higher education should be understood through higher education management, especially through processes, people, leadership, strategy, relationships, funding, structure, and culture. Romanovskyi et al. (2021) further pointed out that higher education innovation includes educational, organizational, managerial, economic, and market-related innovation. These views show that higher education innovation requires systematic management, effective leadership, and institutional support.

CONCEPTS AND THEORETICAL FOUNDATIONS OF DIGITAL ACADEMIC LEADERSHIP

Educational Administration and Higher Education Administration

Educational administration refers to the planning, organization, coordination, leadership, evaluation, and improvement activities carried out by educational institutions to achieve educational goals. Its core purpose is not merely to maintain organizational operation, but to serve educational aims and institutional development. Bush (2020) pointed out that educational administration should always remain connected with educational values; otherwise, it may fall into managerialism that overemphasizes procedures and efficiency. Hoye and Miskel (2003) also argued that educational administration is a field integrating theory, research, and practice, aiming to use organizational knowledge to solve practical problems in educational settings. Therefore, educational administration has both practical and academic characteristics. Higher education administration is a specific form of educational administration in universities and higher education systems. It pays greater attention to higher education governance, academic authority, institutional autonomy, resource allocation, stakeholder coordination, and the relationship among universities,

government, market, and society. Huisman (2009) argued that higher education governance should be understood through the coordination among governments, universities, and other actors. Dobbins et al. (2011) further stated that higher education governance is influenced by the relationships among the state, the market, and the academic community. Therefore, higher education administration should not be understood only as internal affairs management, but also as a process related to authority distribution, decision-making mechanisms, and institutional adaptation. In the digital age, higher education administration faces multiple pressures from globalization, technological change, and innovation-driven development. Liu (2025) pointed out that digital transformation is reshaping leadership and governance in universities, requiring them to develop digital strategies, adjust administrative structures, and strengthen cross-departmental collaboration. Zhu and Caliskan (2022) also emphasized that universities need to adjust their organizational and technological arrangements to enhance resilience and practical adaptability. Therefore, educational administration and higher education administration provide an important theoretical foundation for the development of digital academic leadership.

Digital Transformation in Higher Education

Digital transformation in higher education refers to the process through which universities integrate digital technologies into teaching, research, administration, evaluation, and institutional services. It changes how universities organize academic work, manage resources, communicate information, and support decision-making. Liu (2025) pointed out that digital transformation is reshaping leadership and governance in higher education, requiring universities to develop more adaptive and technology-enabled systems. Zhang (2025) also emphasized that higher education digital transformation should be understood as systematic reform across teaching, management, evaluation, and service. Digital platforms, online learning systems, academic information systems, data analytics, artificial intelligence, and smart campus technologies are increasingly used to support both academic and administrative functions. These technologies help universities improve efficiency, transparency, coordination, and decision-making quality. Zhu and Caliskan (2022) noted that higher education institutions need to adapt their structures and governance practices in order to remain resilient and responsive to social and technological change. This shows that digital transformation requires universities to adjust their administrative systems, governance mechanisms, and organizational practices.

1. Digital Academic Leadership in Higher Education

Digital academic leadership in higher education refers to the ability of academic leaders and administrative leaders to guide digital transformation, coordinate institutional resources, build a digital culture, and support higher education innovation. It is formed at the intersection of educational leadership, digital transformation, and academic governance. Cheng et al. (2024) and Jing et al. (2025) argued that digital academic leadership is an important form of leadership for supporting digital transformation and innovation in higher education. The theoretical foundation of digital academic leadership is closely related to distributed leadership. Distributed leadership emphasizes shared practice, interaction, and collective responsibility. Hartley (2007) pointed out that distributed leadership emerged in education as a response to organizational complexity and the need for change. Harris et al. (2022) also argued that distributed leadership focuses on leadership as a process of practice and interaction. Therefore, digital academic leadership requires cooperation among higher education leaders, teachers, administrative staff, technical staff, and project teams. Digital academic leadership is also supported by e-leadership and digital leadership theories. Van Wart et al. (2017) defined e-leadership as a process of social influence supported by advanced information technology. It requires digital communication, online team building, change management, technological competence, and trust building. Juknevičienė et al. (2025) further pointed out that e-leadership is both a strategic leadership process and a transformational leadership process. López-Figueroa et al. (2025) also emphasized that digital leadership combines technological understanding with human-centered leadership ability.

2. Innovation Management in Universities

Innovation management in universities refers to the process through which higher education institutions plan, support, carry out, and sustain new ideas, new practices, and new forms of institutional development. It is a systematic management activity. It helps universities turn innovation from separate activities into continuous organizational improvement. Girardi (2024) explained that innovation management is the organized process of identifying, developing, and applying new ideas, products, services, and practices. This view shows that innovation management is closely related to planning, resource allocation, leadership support, knowledge sharing, process design, and evaluation.

In universities, innovation management has become increasingly important. Universities now face rapid technological change, stronger competition, stakeholder expectations, and the demand for social relevance. Hall (2020) argued that an innovative higher education should integrate innovation into its structure, mission, and long-term strategy. Iqbal (2021) also pointed out that higher education institutions need strong innovation performance to respond to technological development, funding changes, and new social expectations. Therefore, innovation management is an important condition for institutional resilience, relevance, and competitiveness. Innovation management in universities has several important features. Monticelli et al. (2024) argued that an innovative higher education should be understood through management-related elements such as processes, people, leadership, strategy, relationships, funding, structure, and culture. Romanovskiy et al. (2021) further stated that higher education innovation covers educational, organizational, managerial, economic, and market-related innovation.

DIGITAL ACADEMIC LEADERSHIP AND HIGHER EDUCATION INNOVATION MANAGEMENT

1. Digital Academic Leadership as a Strategic Capability

Digital academic leadership can help academic leaders and administrative leaders connect digital transformation with higher education goals, governance reform, and innovation management. In higher education, digital change requires a clear development direction, resource coordination, organizational support, and continuous improvement. Digital transformation usually involves teaching systems, research platforms, administrative services, data systems, and student support. Effective digital academic leaders can reduce fragmentation by building a shared vision, coordinating different departments, and linking digital initiatives with the long-term development of the higher education. Jing et al. (2025) identified digital strategic foresight, digital resource coordination, digital technology awareness, and digital culture building as important aspects of digital academic leadership. Digital academic leadership also supports higher education innovation management. Innovation management requires universities to identify new ideas, organize resources, improve processes, and sustain institutional change. Girardi (2024) described innovation management as an organized process of identifying, developing, and implementing new ideas and new practices. In universities, digital academic leadership provides conditions for innovation management by guiding digital reform, encouraging collaboration, and supporting data-driven decision-making.

2. Digital Academic Leadership and Organizational Change

Digital academic leadership is closely related to organizational change in universities. It requires leaders to guide members to adapt to change and help different departments work toward common goals. Therefore, universities need a form of leadership that can connect technology, institutional goals, academic work, and organizational improvement. Digital leadership theory also shows that leaders need change-oriented abilities in digital environments. Van Wart et al. (2017) pointed out that e-leadership is a social influence process supported by information technology. It can influence attitudes, behaviors, thinking, and performance in organizations. Juknevičienė et al. (2025) further pointed out that e-leadership is both a strategic leadership process and a

transformational leadership process. These views show that digital academic leaders need to manage digital systems and guide institutional change. They also need to build trust, support digital communication, and help higher education members adapt to new ways of working.

3. Digital Academic Leadership and Digital Governance

Digital academic leadership is closely related to digital governance in universities. Digital governance refers to the use of digital technologies, data systems, platforms, and management mechanisms to support higher education decision-making, organizational coordination, service delivery, and institutional development. In higher education, digital governance affects academic administration, student services, research management, financial systems, institutional evaluation, and communication among departments. Therefore, universities need digital academic leadership to guide the effective use of digital systems and make digital governance serve higher education development goals. Digital transformation has changed the way universities govern and manage institutional affairs. Digital platforms, academic information systems, data analytics, artificial intelligence, and smart campus systems are increasingly used in teaching, research, administration, and services. Liu (2025) argued that digital transformation is reshaping leadership and governance in higher education. Zhang (2025) also pointed out that digital transformation should be understood as a systematic reform across teaching, management, evaluation, and service. These views show that digital governance is a matter of technology use, and it is also related to administrative reform, institutional coordination, and long-term development. Strong digital academic leadership can address these problems by setting clear digital goals, improving coordination mechanisms, building a digital culture, and supporting evidence-based governance. Therefore, digital academic leadership is an important force for improving higher education digital governance and promoting higher education innovation management in the digital age.

GLOBAL AND REGIONAL TRENDS IN DIGITAL ACADEMIC LEADERSHIP

1. Transformation of Higher education Leadership Structure

The digital age is changing higher education leadership structures. Traditional leadership in higher education is usually connected with formal positions, administrative authority, and hierarchical decision-making. However, digital transformation has made higher education governance more complex. Universities now need leaders who can coordinate academic units, administrative departments, technical teams, and external stakeholders. This change requires higher education leadership structures to move from single-position leadership toward more shared, networked, and collaborative forms of leadership.

In higher education, this transformation is closely related to the nature of higher education governance. Universities usually have academic autonomy, collegial traditions, and multiple centers of decision-making. Therefore, leadership requires cooperation among higher education leaders, teachers, administrative staff, and project teams. Hartley (2007) and Harris et al. (2022) argued that distributed leadership emphasizes shared practice, interaction, and collective responsibility.

2. Digital Academic Leadership is Cross-Cultural

Digital academic leadership in the digital age has cross-cultural features. Universities are becoming more closely connected through international cooperation, online learning, academic exchange, joint research, and global digital platforms. Digital academic leadership is not only related to internal higher education management. It also requires leaders to understand global trends, respect cultural differences, and coordinate communication among people from different backgrounds. Globalization has changed the requirements for leadership in higher education. It requires administrators to have a global vision, innovative thinking, and collaborative competence. Zhu and Caliskan (2022) also emphasized that higher education institutions face pressures from

globalization, massification, digitalization, and uncertainty. Therefore, digital academic leadership must support both institutional development and cross-cultural communication.

Transformation of the Higher education Digital Governance System

The digital age is promoting the transformation of higher education digital governance systems. Traditional higher education governance usually depends on separate departments, manual processes, and paper-based administrative procedures. With the development of digital technologies, universities are moving toward more integrated, platform-based, and data-driven governance systems. Digital platforms, academic information systems, student management systems, research management systems, and smart campus tools are increasingly used to support higher education administration. Digital transformation has become an important feature of modern higher education governance. Universities around the world are using digital technologies to improve efficiency, transparency, coordination, and decision-making quality. Digital platforms are widely used in academic administration, student information systems, and institutional evaluation. However, successful digital transformation depends on leadership capacity and organizational adaptability.

Reorganization of Academic Administration and Innovation Management Structures

The digital age is also promoting the reorganization of academic administration and innovation management structures in universities. Traditional academic administration usually depends on separate departments, fixed procedures, and vertical management. Innovation in higher education needs a management structure that can support new ideas, organize resources, improve processes, and sustain institutional change. Monticelli et al. (2024) argued that an innovative higher education should be understood through management elements such as people, leadership, strategy, processes, structure, relationships, funding, and culture. Romanovskyi et al. (2021) also pointed out that higher education innovation includes educational innovation, organizational innovation, managerial innovation, economic innovation, and market-related innovation. These views show that innovation management needs support from internal higher education structures. Digital academic leadership plays an important role in this process. Jing et al. (2025) emphasized that digital academic leadership includes digital strategic foresight, digital resource coordination, digital technology awareness, and digital culture building.

CHALLENGES AND STRATEGIES FOR DEVELOPING DIGITAL ACADEMIC LEADERSHIP IN CHINESE HIGHER EDUCATION

Challenges of Traditional Academic Leadership in the Digital Age

Traditional academic leadership faces clear challenges in the digital age. In many universities, academic leadership has long been connected with formal positions, administrative authority, academic experience, and hierarchical decision-making. This model can support stable management, but its effectiveness may be limited when universities face rapid digital transformation. Digital transformation requires leaders to understand technology, coordinate digital resources, use data for decision-making, and guide institutional change. Liu (2025) argued that digital transformation is reshaping leadership and governance in higher education, requiring universities to develop digital strategies, redesign administrative structures, and strengthen cross-departmental coordination. This shows that traditional leadership needs to be updated according to the new digital environment. In the digital age, higher education leaders need to manage complex digital platforms, academic information systems, online teaching systems, research data systems, and smart campus tools. Higher education leaders also need digital strategic vision, digital governance capability, technological awareness, innovation leadership, and data-driven decision-making ability. These abilities have gone beyond the traditional leadership focus on vision, coordination, and performance management.

Challenges of Digital Fragmentation and Organizational Resistance

Digital fragmentation is another important challenge for the development of digital academic leadership in Chinese higher education. Digital transformation changes work habits, administrative processes, communication methods, and decision-making patterns. Some higher education members may feel uncertain about new technologies, or they may worry that digital systems will increase their workload. Organizational culture theory shows that shared values, norms, and basic assumptions influence how members respond to change. A supportive culture can strengthen cooperation and flexibility, while a rigid culture may increase fragmentation, resistance, and weak innovation capacity. Digital academic leadership must address both technological fragmentation and cultural resistance. Digital academic leaders need to promote system integration, encourage data sharing, improve digital communication, and build trust among different departments. They also need to create a culture that supports openness, cooperation, and exploration. Jing et al. (2025) emphasized that digital academic leadership includes digital culture building, strategic foresight, resource coordination, and technological awareness. These abilities can help universities transform separated digital practices into more coordinated and innovation-oriented governance.

Strategies for Strengthening Digital Academic Leadership Capacity

Strengthening digital academic leadership capacity is an important strategy for the development of Chinese higher education in the digital age. Digital academic leadership should become an institutional capacity supported by training, policy, culture, and digital governance systems. At the same time, universities should strengthen digital leadership training for academic leaders and administrative leaders. Leaders need to understand how digital technologies influence teaching, research, administrative management, and institutional services. E-leadership requires digital communication, technological competence, team building, and trust building.

Strategies for Establishing Collaborative and Data-Informed Innovation Management Systems

Universities need collaborative and data-informed innovation management systems to support digital academic leadership. Integrated digital platforms can connect teaching, research, administration, student services, and institutional evaluation. These platforms help departments share data, reduce repeated work, and improve communication. Digital transformation is changing how universities plan, coordinate, make decisions, allocate resources, and evaluate performance. With better digital systems, universities can move from traditional management to more strategic and data-informed governance. Data also plays an important role in innovation management. It helps leaders identify institutional problems, evaluate reform results, and make more reasonable decisions. Innovation management requires planning, resource allocation, leadership support, knowledge sharing, process design, and continuous evaluation. Girardi (2024) described innovation management as an organized process of identifying, developing, and implementing new ideas and practices.

CONCLUSION

Digital academic leadership is an important leadership ability for higher education innovation management in the digital age. As higher education institutions face globalization, digitalization, technological change, and the growing need for institutional innovation, traditional administrative management can no longer fully meet the needs of higher education development. Digital academic leadership is grounded in educational administration, higher education governance, distributed leadership, e-leadership, and digital leadership theories. It supports higher education development by guiding digital transformation, coordinating institutional resources, building a digital culture, improving digital governance, and promoting innovation management. The development of digital academic leadership requires several supporting conditions. Universities need an innovation-oriented organizational culture, stronger digital literacy among higher education members, better digital governance capacity, and a clearer strategic vision. At the same time, universities must deal with challenges such as the limitations of traditional leadership, digital

fragmentation, organizational resistance, insufficient data sharing, and weak cross-departmental coordination.

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