

# Executive Digital Leadership and Knowledge Management under the Digital Transformation of Enterprises

Fangyu Lin \*

School of Logistics and Management Engineering, Yunnan University of Finance and Economics, Kunming Yunnan, 650221, China

\* Corresponding author Email: 156616934@qq.com

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**Abstract:** Digitalization has triggered a change in the original organizational form and leadership style of enterprises, and has also launched new challenges to the practice of knowledge management processes in enterprises. How should future leadership be improved in the context of new digital technologies? How to utilize advanced technologies such as big data and the internet to acquire and integrate effective knowledge from both internal and external sources, thereby achieving knowledge creation? How can future leadership effectively integrate with knowledge management processes to maintain the sustainable competitiveness of enterprises? This article is based on the leadership theory at home and abroad and the development requirements under the new technology environment. Through reviewing literature at home and abroad, it is found that in the future, with the continuous development of digital technology, the relationship and influence between digital leadership and knowledge management will become more close and profound. In order to better respond to the challenges of digital transformation, enterprises need to continuously strengthen their digital leadership and practical exploration of knowledge management to lead sustainable development and innovation.

**Keywords:** Digital Transformation; Digital Leadership; Knowledge Management.

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## 1. Introduction

Currently, the wave of digital transformation is widely spreading globally. The rapid development of new generation information technologies such as big data, artificial intelligence, cloud computing, the Internet of Things, and blockchain has brought about profound changes in various organizational methods through technological innovation and integrated applications. According to the "New IT Reshaping Enterprise Digital Transformation (2022)" released by the China Institute of Information and Communications at the "2022 Digital Transformation Development Summit Forum" held in 2022, digital transformation has become an inevitable trend for enterprise development. Various industries are undergoing digital transformation, including trade union organizations, insurance industry, construction industry, and digitization of politics and law. In the process of digital transformation, enterprises need to change their mindset, establish a digital culture, and conduct digital training to enhance employees' digital literacy and skills. At the same time, digital transformation also requires leaders of enterprises to possess digital leadership, including sensitivity to digital technology, forward-looking thinking, strategic insight, and initiative for continuous change. Research has found that the difficulties faced by enterprises in implementing digital transformation mainly stem from insufficient leadership, such as leaders lacking foresight in implementing digital transformation, inability to formulate clear strategic directions, and inability to help employees adapt to digital challenges (Vial, 2019). Digital leadership is one of the key factors in achieving digital transformation in enterprises. Only with leaders who possess digital leadership can enterprises achieve better development in the digital era.

The digital transformation has triggered a change in the original organizational form and leadership style of

enterprises, and has also launched new challenges to the knowledge management practices of enterprises. Digital leadership and knowledge management have important connections in the digital age. Digital leadership includes an understanding of digital technology, as well as skills and ways of thinking demonstrated through behaviors such as acquiring information through digital means, adapting quickly to change, and empowering followers. In terms of knowledge management, digital leadership requires leaders to possess the ability to manage knowledge, including identifying and creating new knowledge, as well as applying knowledge to problem-solving and seizing new opportunities. Leaders also need to improve the organization's knowledge reserve and innovation capabilities by establishing an open work environment and encouraging employees to share ideas and opinions. In addition, data-driven decision-making is also an important component of digital leadership. Leaders need to have the ability to analyze and interpret data in order to make wise decisions based on data, better understand market trends, customer needs, and organizational performance, and make accurate strategic adjustments and judgments. In short, digital leadership and knowledge management are inseparable, and leaders need to combine the two to promote digital transformation and sustainable development of organizations through innovation and open communication.

In response to the needs of reality, there has been a heated discussion in the academic community on the issue of digital leadership and knowledge management for executives in the context of digital transformation. However, due to the fact that this phenomenon has not attracted widespread attention for a long time, relevant research is still relatively scattered and lacks systematicity. Therefore, this article attempts to explore the significance of leadership and management theory in the development of leader management. In order to fill the research gap, this article analyzes how digital leadership plays

a crucial role in the development of enterprise knowledge management in the new digital era.

## **2. Research Trends in Digital Leadership at Home and Abroad**

Looking at existing domestic and foreign literature, research on digital leadership mainly focuses on two aspects: firstly, the concept and characteristics of digital leadership; The second is the impact and effects of digital leadership, which focuses more on exploring its impact on organizational level outcome variables such as innovation management, dynamic capabilities, and organizational performance. Hernandez et al. (2011) defined digital leadership as the process of "information technology leading to changes and influences in leaders' concepts, emotions, behaviors, and other aspects. Roman et al. (2019) argue that digital leadership is a process of social influence that requires not only communication, motivation, and management from leaders, but also their perception, understanding, and integration into the information technology environment. Kane et al. (2019) and Li Yanping et al. (2020) defined digital leadership as the ability of leaders to create clear and meaningful digital and sustainable development visions in organizational change, encourage employees to actively participate in organizational digital change, and ensure the effective operation of organizations in the digital economy environment. Ju Yanpeng (2021) believes that digital leadership refers to the use of digital technology by leaders to change their behavior patterns, emotional expression, and thinking patterns, and to help subordinates change their behavior and thinking, thereby improving the performance of teams and organizations. Qi Yudong and Xiao Xu (2020) believe that if a company lacks managers who are proficient in strategy and digital thinking, and cannot seize opportunities for change in the wave of digital technology, this transformation will be difficult to achieve smoothly. In the study on the impact of outcome variables on digital leadership, Wasono et al. (2018) found that digital leaders use digital technology to revolutionize management and promote management innovation; Sasmoko et al. (2019) found that digital leadership has a positive impact on organizational dynamic capabilities; Soon et al. (2021) confirmed that digital leadership can help determine digital business strategies, thereby improving business performance. Few scholars have explored the impact of executive digital leadership on the knowledge management process under digital transformation. Knowledge management is an eternal theme of enterprises, especially in an era of strong instability, uncertainty, complexity, and ambiguity. Knowledge management is a tool for organizations to maintain vitality and resilience, and an important carrier of organizational innovation. Therefore, exploring how digital leadership can effectively achieve knowledge creation during digital transformation The management process of knowledge acquisition and storage, knowledge sharing, and knowledge application and use is of great significance.

## **3. The Structural Dimensions of Executive Digital Leadership in the Context of Enterprise Digital Transformation**

Looking at existing literature, it can be found that there is

no consensus in the academic community on the dimensional composition of digital leadership. From the perspective of personal abilities of executives, Yan Zheng (2007) and Benitez (2022) divided digital leadership into four dimensions: digital thinking ability, digital investigative ability, digital social ability, and digital reserve ability. Firstly, digital thinking ability means that leaders need to develop strategies that are suitable for the development of the enterprise, inspire people, and inspire employees to strive for a common vision, thereby achieving organizational goals. Leaders integrate digital thinking into the sustainable development strategy of the enterprise, possessing the ability to have a long-term strategic layout, insight into the future, and layout the ecology. Secondly, digital investigative power means that leaders need to grasp the trend of the world economy, adapt to the progress of the industry, and understand the development trend of enterprises. Leaders possess a certain level of digital literacy, can timely insight into the development trend of technology and environmental policies, and can make clear decisions and deployments in the face of constantly changing environments. Thirdly, digital social power means that leaders need to continuously standardize and optimize work processes to further improve the efficiency of enterprise work. Leaders actively learn and use digital tools to improve communication and collaboration efficiency with employees, provide employees with innovation and communication space, and improve the ability of organizational operations. Fourthly, digital reserve refers to the ability of leaders to recruit and cultivate the necessary talents based on the development of the enterprise, reward and recognize employees' efforts and achievements, provide space for employees to grow and leverage their strengths, and ensure talent reserve to support the sustainable development of the enterprise. Based on the personal qualities of executives, Song Qiting (2023) divided digital leadership into 8 dimensions based on grounded theory. Firstly, digital growth thinking enables executives to transform their digital transformation mindset and strategy through continuous learning, exploration, and innovation, as well as their ability to quickly adapt to uncertainty and change. Secondly, guided by digital strategy, executives can accurately grasp the trends and changes of digitalization, clarify the goals and paths of digital transformation, develop feasible digital strategies, and promote the implementation and execution of digital strategies throughout the group. Thirdly, digital transformation and innovation require executives to understand the application scenarios of digital technology, the integration points between digital technology and business innovation, and the process of combining digital technology with business innovation to promote enterprise innovation, drive enterprise development, and enhance enterprise competitiveness. Fourthly, digital ethics. In the process of digital transformation, executives must not only focus on the application of digital technology, but also pay attention to ethical, legal, and ethical issues. Fifth, digital analysis and decision-making, executives use digital technology for data analysis to make more scientific and reasonable decisions, in order to improve the decision-making ability and efficiency of the enterprise. Sixth, digital knowledge sharing. Senior executives actively share digital knowledge and experience, and play a promoting role in the dissemination and popularization of digital knowledge, so that the digital transformation of enterprises can proceed smoothly and achieve the goal of full participation and co construction and

sharing. Seventh, digital communication and coordination. Senior executives should be adept at using digital technology for information communication and coordination, in order to effectively coordinate the internal and external relationships of the enterprise and promote the orderly progress of digital transformation. Eighth, digital culture construction, executives can lead the development of digital culture, establish the core values and cultural atmosphere of digital enterprises, and create a good digital work environment and corporate image.

#### **4. The Impact of Digital Leadership on Knowledge Management**

As is well known, knowledge, as an essential component of enterprises, still faces some management problems in the process of digital transformation to some extent. At present, there are still some leaders who do not recognize the importance of digital transformation in the knowledge management process of enterprises, and believe that it is not important to conduct knowledge management process transformation. Therefore, in the process of digital transformation, enterprise knowledge management often encounters problems of lack of systematicity, efficiency, and completeness. In this regard, leaders in the digital era should pay attention to the transformation and upgrading of enterprise knowledge management systems, and recognize the importance of digital transformation in the knowledge management process. Leaders need to strengthen their ability to apply digital management knowledge. The knowledge management process is the process by which enterprises manage and manipulate their knowledge resources (Holsapple and Joshi, 2000) to achieve higher performance (Oufkir and Kassou, 2019). Given the important role of knowledge management in the sustained competitiveness of enterprises, scholars have conducted in-depth discussions on the process of knowledge management through practice (Zhang et al., 2022). Although there is no authoritative classification for the process of knowledge management, it generally includes four aspects: knowledge creation, knowledge acquisition and storage, knowledge sharing, and knowledge application and use (Al Ahbabi et al., 2019). In digital transformation, knowledge management can help enterprises better manage and utilize knowledge assets, improve production efficiency, reduce costs, and enhance market competitiveness.

Digital leadership has a significant impact on the knowledge management process. Firstly, digital leadership can promote knowledge creation. Leaders with digital leadership possess keen insight and digital thinking, able to capture changes in market and customer needs, and guide enterprises to continuously innovate and progress.

Secondly, leaders with digital leadership possess digital detection capabilities, which enable them to access external information and knowledge resources more conveniently through digital technology, providing enterprises with more opportunities for innovation and development.

Furthermore, leaders with digital leadership possess digital social skills, which can facilitate the organization and evaluation of knowledge. Leaders will formulate scientific and reasonable strategies and plans, clarify the direction and goals of enterprise development, and organize and integrate internal and external resources to achieve these goals. In this process, digital leadership can use digital technology to

establish a knowledge base and knowledge map, classify, index, and evaluate knowledge assets, and improve the efficiency and effectiveness of knowledge management.

Finally, digital leadership can promote knowledge sharing and application. Leaders with digital leadership will establish an open cultural atmosphere and collaborative mechanisms, encouraging knowledge sharing and exchange among employees. Simultaneously, through digital technology, knowledge dissemination and sharing are carried out to improve the utilization and effectiveness of knowledge.

#### **5. The Improvement Path of Executive Digital Leadership in the Context of Enterprise Digital Transformation**

##### **5.1. Enhance Digital Awareness, Learn and Master Digital Technology**

Enterprise executives need to have a deep understanding of the connotation and application of digital technology, including the latest technologies and architectures, as well as the importance and urgency of digital transformation. Only with a profound understanding of digitalization can one play a leadership role in enterprises and drive digital transformation. In addition, you can attend training courses, read relevant books and articles, participate in technical forums and conferences, and pay attention to industry trends, continuously learn and master the latest digital technologies and development trends, in order to better guide enterprises in digital transformation.

##### **5.2. Cultivate Digital Talents and Establish Digital Teams**

Enterprise executives need to attach importance to the cultivation of digital talents, explore and cultivate digital and technical talents internally, establish their own digital teams, and master the latest digital technologies and methods to better guide enterprises in digital transformation.

##### **5.3. Integrate Resources from All Parties, Promote Internal Cooperation and Communication**

Enterprise executives need to have a sense of challenge in strategic integration and resource investment, comprehensively integrating resources from all parties, including talent, finance, technology, business, and other aspects. At the same time, it is necessary to be adept at utilizing information technology and other means to obtain market information and customer needs, in order to grasp the overall allocation of resources, promote the rational use and optimized allocation of resources. At the same time, it can also organize internal meetings, establish internal communication platforms, and promote cooperation and communication among various departments within the enterprise, in order to better integrate resources and promote digital transformation.

##### **5.4. Establish a Digital Culture, Continuously Learn and Improve**

Enterprise executives need to advocate and establish a digital corporate culture, encourage employees to actively participate in digital transformation, share digital knowledge and experience, promote knowledge sharing and exchange within the enterprise, maintain mastery and learning of digital

technology at all times, and continuously improve their digital literacy and leadership abilities to adapt to the constantly changing market environment and enterprise needs.

## 6. Conclusion

With the transformation and upgrading of digitalization, a new concept that intersects digital perspectives and leadership theory has emerged - digital leadership is more determining the direction of enterprise development towards digitalization. The changes of the times not only drive the transformation of corporate leadership methods, but also put forward new requirements for knowledge management in enterprises. As an important part of the digital transformation process, the development of leadership and the digitization of knowledge management processes can not only help enterprises achieve organizational structure upgrading and transformation, but also create and update value for various aspects of the organization through digital capabilities. Ultimately, the survival and sustainable development of enterprises caught up in the new digital wave depend on the digital leadership of leaders. Only by possessing efficient leadership in the digital era can leaders truly promote digital transformation in enterprises.

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