The Reform of Human resource management in Enterprise Digital Transformation

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Abstract: The advent of the digital wave has introduced new impetus into the practice and research of human resource management. Concurrently, managers and scholars face the challenge of seamlessly integrating digital technology with employees and leveraging its positive impact. While academic research on digital transformation extensively explores themes such as business models, industry innovation, technological advancements, business intelligence, and digital marketing, there is a relative lack of examination concerning human resource management. This paper focuses on the transformation of human resource management within the context of digitalization, addressing the exploration of how this transformation unfolds during the process of digital transformation. The study seeks to uncover pertinent issues and conduct research on the changes in human resource management throughout the digitalization journey. As organizations navigate the digital era, optimizing the integration of digital tools with human resources becomes crucial for successful transformations. This research aims to contribute to the discourse on the intersection of digitalization and human resource management practices, shedding light on the evolving landscape of HR in the digital age.

1 Introduction

In the digital age, businesses are presented with both opportunities and challenges in the rapid development of the digital economy. Digital transformation has emerged as an undeniable trend. Human resource management, as a critical component of enterprise management, has undergone profound changes in the wake of this digital transformation.

According to data from the Nielsen Talent Management Research Institute's report, "Digital Talent Management: From Now to the Future," 22.2% of Chinese enterprises currently possess tangible experience in digitizing their human resource management processes. Meanwhile, 70.6% of enterprises are gearing up to explore the realm of digital HR management, with only 3.2% considering their practices in this area as highly successful. This review aims to revisit existing literature and delve into the impact and transformation brought about by digitalization on human resource management. The guiding principle of this transformation is the embrace, adaptation, and support of digital technologies. As for the intricacies of how human resource management undergoes transformation during the digitalization process, the effects it yields, the assessment of those effects, the driving forces at play, and other pertinent issues, our knowledge is but a fraction of the unknown. In the face of the ongoing and rapid changes, this review seeks to unearth the processes of transformation within human resource management in the context of digital transformation and to engage in relevant research.

2 Digital Transformation and Human Resource Management

Digital Transformation and Human Resource Management are closely intertwined. The former involves introducing digital technologies to reshape business and processes, while the latter focuses on managing and developing talent within the organization. Digital Transformation supports various aspects of Human Resource Management by providing digital tools, data analytics, and automated processes. This encompasses functions such as recruitment, training, performance evaluation, and employee experience enhancement.

Digital Transformation also enables Human Resource Management to align more closely with strategic and organizational goals, enhancing strategic execution and overall performance. Concepts like the digital workplace, digital operational efficiency, and digital decision-making play pivotal roles in Digital Transformation, leading to significant improvements in productivity and bolstering a company's competitive edge.

The digital strategic transformation, achieved through the fusion of organization, employees, and digital technology, facilitates the harmonious alignment

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of Human Resource Management with corporate strategy, thereby promoting sustained development in the digital era.

Digital Transformation and Human Resource Management is a process that utilizes digital technology to optimize and enhance internal HR activities within an enterprise. It aims to redefine and redesign the business scenarios and processes of HR management, fostering connectivity between internal systems and the external environment through data-driven approaches. Digital Transformation empowers enterprises to more effectively recruit, nurture, manage, and motivate employees, enhancing employee performance and satisfaction through technological and innovative means, thus providing support for the company's continuous development, innovation, and growth.

This includes using digital tools to recruit high-potential talent, optimize employee performance assessments, and provide personalized career development opportunities, among other initiatives. The success of Digital Transformation necessitates the integration of technology, data analytics, and best HR management practices to achieve more efficient talent management and organizational operations.

In Song Chen's (2021) perspective, digital media has introduced a new dimension to talent development through analytical practices. Digital technology is regarded as a novel skill, with its formidable capabilities in data collection, mining, and analysis, offering reliable decision support for human resource management. Furthermore, digital media has blurred the temporal and spatial boundaries of human resource management. The application of digital media technologies has innovated the work patterns of enterprises, giving rise to new work models such as talent clouds, platform-based work teams, the gig economy, and remote work. This has effectively dismantled the temporal and spatial constraints of traditional work models.

3 Characteristics of Digital Human Resource Management

Digital Human Resource Management (Digital-HRM) is characterized by the integration of technology, data, and management practices aimed at enhancing the efficiency, quality, and strategic support capabilities of an organization's human resources.

According to Li Yanping (2021), the reprogrammability of digital technology and the homogenization of data contribute to its availability. This means that different organizations and individuals can utilize the same digital technology for diverse purposes, facilitating customized management of employees within organizations. Based on this, five key features can be distilled for digital-HRM: data-driven HRM activities, increased complexity in management, enhanced convenience in management processes, precise management practices, and customized management approaches.

3.1 The Application of Digital Technology in Digital HRM

With the upgrade driven by digital technology, digital transformation encompasses more than just the application of information technology. It also includes elements such as digital talent, digital tools, digital management, and digital scenarios, providing a comprehensive upgrade to human resource management. Xie Xiaoyun et al. (2021) discussed emerging practices brought about by the application of digital technology in the field of human resource management, and they also examined employees' perceptions, emotional experiences, adaptation, and resistance to these changes.

3.2 Liberating Human Resource Time

Liberating human resource time, through digital tools and automated processes, reduces repetitive tasks, allowing human resources to focus on strategic planning and high-value work. Scholar Li Yanping (2020) argues that data not only connects previously disparate entities, people, and activities, making management more convenient, but also enhances the efficiency of technology, capital, and talent utilization, rectifying resource mismatches and making management more precise.

3.3 The Close Interconnection of Strategy, Organization, and People

Digital transformation enhances the synergy between human resources, corporate strategy, and organizational goals, leading to improved strategic execution and performance. According to Ma Jun (2022), digital transformation affects the value of an organization's human resources and its corresponding human resource management from multiple perspectives, including technology, organization, and the environment.

3.4 Employee-Centric Operational Model

Digital transformation emphasizes providing a one-stop human resource service tailored to employees to address their issues and needs, ultimately enhancing employee satisfaction. According to Ma Jun (2022), the digital transformation of human resources should also focus on emotional attachment or two interconnected ways: firstly, human resource technology assists employees in connecting with each other, helping them establish a sense of belonging through the development of interpersonal relationships.

3.5 Enhancing Employee Experience and Performance

Digital tools can optimize employee performance assessments, career development opportunities, and help attract and retain top talent. Weiss (1996) proposed the Affective Events Theory, suggesting that employees respond emotionally
to various events in the work environment, leading to emotional experiences. These emotional experiences further influence employees’ work attitudes and behaviors. According to Cheng Xiaomeng[5] (2022), data-driven human resource management, based on data intelligence technology, is characterized by openness, convenience, and self-renewal. These features contribute to employees exhibiting more innovative behavior during the application process.

4 The Challenges and Opportunities of Digital Human Resource Management

Li Zaichi[6] (2021) suggests that research on obstacles to digital transformation primarily focuses on the micro-level. Scholars in the field of management often conduct case studies on individual or multiple enterprises, with a more comprehensive perspective on areas such as corporate strategy, organizational structure, and human resources. The research outcomes in this domain are abundant.

In Organizational Structure Aspect, promoting the digital transformation of human resource management is not only an inevitable choice for enterprises to cope with environmental changes but also a crucial cornerstone for overall digital transformation within organizations (Wang Xinnan, 2020). It facilitates comprehensive and three-dimensional changes in internal strategies, structures, functions, and processes, thereby helping enterprises gain a competitive advantage in the market competition.

In Organizational Strategy Aspect, Qing Yudong[7] et al. (2020) pointed out that flat organizations, precision marketing, flexible production, iterative development, and flexible employment are new requirements posed by the development of digital technology on organizational management. Chen Jian[8] et al. (2020) explored how digital enablement and empowerment help organizational management achieve pattern innovation and enhance operational efficiency and effectiveness. In human resources aspect, firstly, for employee skill gap, in the process of digital transformation, a challenge arises from insufficient employee capabilities. Given that projects often involve cross-departmental collaboration, employees with strong coordination and communication skills are needed to take on project management roles. However, technical employees focused on research and development often lack these skills (Dremel et al., 2017). This situation may lead to non-digital professionals assuming project manager roles in technology-intensive projects that would ideally be led by digital specialists. Employees find themselves undertaking functional roles beyond their original responsibilities and professional capacities (Yeow et al., 2017). The lack of professional or managerial competencies can directly impede the progress of transformation.

On the aspect of employee skills, the emergence of new automated digital factories poses a challenge as existing employees may struggle to cope with the required skills and learning capabilities. It becomes increasingly crucial to promptly identify the new skills employees need. Digital transformation imposes higher demands on employees, such as utilizing analytical functionalities of digital technologies to address progressively complex business issues. This transitional period of employee upgrading poses significant challenges for businesses and the field of human resources. Secondly, in employee resistance, some scholars have observed that certain employees exhibit resistance when confronted with new digital technologies (Fitzgerald et al., 2014; Kane, 2014; Svahn et al., 2017). Fitzgerald et al. (2014) found that resistance is primarily related to the speed and manner in which new technologies are introduced. Introducing technologies too rapidly can lead to "innovation fatigue." They argue that this resistance stems from employees’ daily work habits and cannot be simply addressed by urging them to change their work behavior. Instead, optimizing workflows to enhance flexibility and guiding employees to gradually adapt to new work rhythms is more effective.

Svahn et al. [9](2017) suggest that inadequate awareness of the benefits of introducing digital technologies is a significant cause of resistance. They found that organizing seminars within the organization related to digital transformation can help reduce resistance and improve cross-functional collaboration. Therefore, inviting specialized technical guidance personnel to train and explain the use of new technologies in a manner aligned with employee habits may alleviate resistance.

Wei Zidong[10](2021) believes that the digital transformation of human resources management in China’s power industry has begun to show initial effectiveness. He addresses challenges related to the digitization of management concepts, employee development in the era of technological revolution, and employee care under precision management. To tackle these new challenges, he proposes the following strategies:

1. Continuously accelerating the Digital Transformation Process
2. Maintaining an ongoing acceleration of the digital transformation;
3. Ensuring the sustained progress of the organization towards digitization;
4. Synthesizing data from various modules to form comprehensive human resources management;
5. Integrating data from various modules to establish comprehensive human resources management;
6. Enhancing overall efficiency;
7. Addressing negative issues arising in the digitalization process;
8. Paying attention to potential negative issues that may arise during the digitalization process and proactively address them;
9. Providing assistance and support for employees;
10. Offering assistance and support to employees to help them adapt to the new work environment and practices during the digital transformation;
11. Effectively Utilizing digital tools;
12. Maximizing the use of digital tools to improve work efficiency and management capabilities;
13. Protecting employee rights and privacy.
Digitalized human resources management, while facing numerous challenges, also presents significant opportunities. The digital transformation necessitates concurrent innovation in human resources, supporting the overall digitization of the enterprise. The increased demand for remote work places higher demands on human resources management.

Opportunities: Digitalized human resources management provides enterprises with more effective means of employee management, assisting in navigating organizational changes, enhancing employee experience and performance, and contributing to sustained business growth.

In the digital era, human resources must adapt to new organizational models, the utilization of big data, and other changes. While addressing challenges, leveraging digital tools actively, optimizing decision-making processes, and enhancing managerial efficiency are essential to pioneer more flexible, efficient, and innovative human resources management practices.

5 Prospects for Future Research

5.1 The Challenges of Digital Transformation in Small and Medium-sized Enterprises (SMEs)

The current challenges of digital transformation in small and medium-sized enterprises (SMEs) have gradually become a focal point of international research. Most scholars argue that the primary disparities between SMEs and large enterprises lie in the insufficient resources and capabilities, such as funds and technology. Consequently, research efforts predominantly concentrate on reducing the costs of digital transformation and providing support and guidance to SMEs. However, we contend that the core issue in the digital transformation of SMEs lies in the effective introduction and integration of digital technologies.

SMEs cannot undergo a thorough and complete digital transformation akin to large enterprises, not only due to limitations in resources and capabilities but also because of the distinctive individual characteristics among enterprises. It is challenging to directly adopt and use standardized technologies and software. Therefore, we propose that the research focus on the problems of digital technology adoption and integration from the following perspectives:

Knowledge Management Theory: Examine the process by which SMEs select, introduce, and integrate digital technologies, especially addressing the digitization of tacit knowledge.

Core Needs of Digital Transformation: Investigate the core requirements of digital transformation for SMEs, particularly how to gradually introduce digital technologies and ensure their organic integration. The core needs vary across different technological paradigm industries, necessitating in-depth research within industries and enterprises.

Customization of Digital Transformation: Study how to meet the personalized needs of SMEs. Given the evident individual characteristics of SMEs, deep collaboration with technology companies for customized services seems to be the optimal solution. However, challenges such as ambiguous knowledge transfer mechanisms, low efficiency in collaboration models, and high collaboration costs need urgent resolution.

Policy Research on Support for SME Digital Transformation: Examine policies supporting SME digital transformation. Existing research suggests that simple support policies for SMEs are insufficient. Therefore, exploring how to establish a comprehensive policy support system and the role the government should play in it requires in-depth investigation.

5.2 The Challenges of Digital Transformation in the Chinese Context

The majority of research findings in the field of digital transformation are currently derived from foreign literature, with limited studies specifically addressing the Chinese context. The few existing studies on Chinese issues mainly focus on strategic aspects, and there is a scarcity of qualitative research based on institutional, systemic, and in-depth industry or enterprise perspectives. As mentioned earlier, the core of digital transformation lies in digital technology, but it is crucial to embed technological issues within specific contexts for meaningful insights.

Wei Jiang and Liu Yang (2017) highlighted the virtually blank area of research in the construction and evolution of digital infrastructure under China's unique institutional, market, and technological system. The institutional and market environment in China is complex and distinctive, making it valuable to explore digital transformation and innovation issues in the Chinese context to expand existing theories and guide practical applications. Additionally, Chinese enterprises present a unique research focus. Firstly, Chinese enterprises are significantly influenced by policies. Secondly, many Chinese enterprises, especially small and medium-sized enterprises, often start from low-end markets with poor digital foundations. Therefore, how should these enterprises implement digital transformation? What obstacles do they encounter? Are there new transformation strategies? These questions are worth exploring.

For instance, Peng Xinmin et al. (2017) suggested that the digital background provides a good opportunity window for latecomer enterprises in the Chinese context. The Development Research Center of the State Council's research team (2020) also pointed out that China's massive scale advantage provides a rich context for digital transformation and innovation. We believe that research on digital issues in the Chinese context can be explored from the following perspectives:

1) National and Regional Level: Investigating the construction and governance of the digital transformation system in China.

2) Institutional and Systemic Perspective: Studying the uniqueness of the evolution of digital
transformation in China from an institutional and systemic viewpoint.

(3) Enterprise Level: Exploring how Chinese enterprises undertake digital transformation, delving into the process and influencing factors.

6 Conclusion

Summarizing existing research findings, it is crucial to underscore the significance and impact of digital transformation on human resources management. The call to further deepen research efforts and promote innovation and development in human resources management within the context of digital transformation is directed towards both the academic community and businesses.

By presenting a comprehensive structure and content overview, this work aims to provide readers with a profound understanding and foundation for exploration in the realm of human resources management transformation amid digitalization.

Despite the partial achievements in scholarly research on digital HRM, there are still gaps that need to be addressed. Future endeavors should delve deeper into the exploration and discussion of this evolving field. It is essential to advance our understanding and practices, fostering a dynamic landscape for innovative approaches in the digitized era.

References


