Original Research Article

An brief analysis of digital transformation pathways for HRM based on ADKAR model

Jiahui Huo
Intermediate Economist/Assistant Researcher in HR Department, Shenzhen Polytechnic University

Abstract: This paper examines the digital transformation pathways for Human Resource Management (HRM) using the ADKAR Model. It traces HRM's evolution from early systems to digital HRM, driven by technologies like Big Data, AI, and IoT. The study highlights how digital tools revolutionize key HR practices such as training, performance evaluation, and employee engagement. Using the ADKAR Model's five stages, the paper offers recommendations for effective digital HR transformation. These include establishing shared understanding, igniting motivation, providing comprehensive training, translating knowledge into skills, and sustaining transformation through continuous monitoring and recognition.
Keywords: human resource management; ADKAR model; digital transformation

1. The development of human resource management

Driven by IT advancement, the forms of earliest personnel management have progressively evolved through distinct four stages: Human Resource Management Information Systems (HRMIS), Information-based Human Resource Management, Virtualized Human Resource Management, finally developed in the current stage of Digital Human Resource Management [1].

During the Human Resource Management Information Systems phase, companies primarily depended on computer systems to execute planning, management, decision-making, and control activities with significantly enhanced efficiency and reduced operational costs [2]. This technological foundation enabled more systematic data handling and basic automation of administrative HR tasks.

Subsequently, to align with shifts in corporate strategic models, Information-based Human Resource Management emerged [3]. This stage marked a deeper integration of all practical facets of human resource management with information technology. It substantially elevated work efficiency, facilitated the consolidation of internal and external organizational resources, and crucially fostered participation in corporate management across all internal departments and the entire workforce [3, 4]. The infusion of IT transformed HR from a primarily administrative function into a more strategic partner.

Further development led to Virtualized Human Resource Management, caused by the capability of network technologies, which dissolved traditional organizational boundaries [5]. This model facilitated the formation of virtual partnerships and collaborative ecosystems beyond the physical boundaries of the enterprise. Virtualized HRM empowered organizations to strategically coordinate both internal and external relationships, thereby optimizing the utilization of external talent pools, expertise, and resources. It represented a shift towards boundaryless, networked HR operations.

This historical change emphasized that technological advancements in human resource management are linked to simultaneous progress in information technology and the ability of businesses to adapt and evolve. The evolution shows an ongoing alignment with both technological opportunities and strategic needs.

Presently, the adoption of emerging information technologies, including Big Data analytics, Cloud Computing, Artificial Intelligence (AI), and the Internet of Things, is making organizations through another profound wave of change driven by digitization. This technological shift is giving rise to digitally empowered human resource management era. This model leverages the forecasting ability of data analytics, the expansive potential of cloud platforms, the automation and analytical strengths of AI, and the interconnected nature of IoT to completely transform how we approach talent recruitment, development, employee engagement, performance evaluation,

and long-term workforce planning. The era of Digital HRM marks a shift towards forward-looking, data-informed, and highly customized strategies for managing human resources .

2. Digital human resource management practice

Looking at how digital empowerment is applied through the framework of fundamental human resource management practices, we can see its revolutionary effects in key domains: knowledge and skill development, employee motivation, and employee engagement [6]. These digital improvements are clearly reflected in four key functions: employee training programs, performance evaluations, reward and incentive systems, and organization-employee relationships [7].

2.1. Training & Development

When it comes to training, combining Big Data analytics, advanced budgeting algorithms, and data mining methods enables us to analyze talent with a level of accuracy that was never possible before [8]. Organizations can construct comprehensive data-driven employee profiles, a kind of big data portraits, that map individual competencies, learning patterns, and career trajectories against organizational needs.

This detailed insight lets us create personalized career development pathways with great precision and pinpoint exact training needs for specific skills, shifting away from one-size-fits-all programs to skill-specific training, optimizing investments in our people's potential [9]. Predictive tools can even forecast future skill shortages, allowing us to take action with training before issues arise.

2.2. Performance evaluation

Performance evaluation undergoes a fundamental shift through digital empowerment. By recording unstructured data streams, including but not limited to electronic attendance records, access logs, communication patterns, and even anonymized analysis of video feeds for behavioral cues (adhering to ethical guidelines), organizations gain real-time, objective insights into employee work behaviors, engagement levels, and even clue on invisible mood and attitudes [10]. Furthermore, advanced machine learning techniques and organizational network analysis (ONA) with simulation models can help us understand and forecast the complex ways employees work together and collaborate [11].

This ability to predict helps managers make better decisions based on real data. They can create more fair performance reviews, put together the best teams, find people who have a big impact but might be overlooked, and formulating policies that enhance overall productivity and collaboration.

2.3. Reward & Incentive systems

The digital transformation profoundly reshapes rewards and incentives. Organizations can use complex datasets to calculate optimal compensation packages, dynamically pay with performance metrics, market benchmarks, individual contributions, and strategic objectives. This facilitates automated compensation management systems, significantly reducing administrative burdens and minimizing errors. Crucially, data-driven transparency in compensation and reward allocation processes acts as a powerful tool for enhancing perceived fairness and equity in incentive schemes. Predictive modeling can also make the motivational impact of different reward structures, allowing for more effective incentive design.

2.4. Organization-employee relationships

Perhaps the most profound impact lies in reshaping the fundamental organization-employee relationship. Digital empowerment dissolves the physical boundaries of traditional workplaces [12]. While enabling flexibility and access to global talent, this pervasive connectivity simultaneously creates a novel phenomenon termed the digital distance between the organization and its employees [13]. This refers to the psychological and relational gap that emerges as technology-mediated interactions increasingly replace traditional face-to-face communication. When managers and employees don't see each other as much, it can make employees feel like they have less power or that their managers don't really value their input [14]. If we don't pay attention, the lack of face-to-face interactions can make people feel less connected. This can lead to lower trust, a sense that the company doesn't support them, a weaker team spirit, and challenges for leaders. To avoid these problems in virtual or hybrid work settings, we need to come up with smart ways to help people feel connected, build trust, and give them more

power to do their jobs. This means changing how we communicate, developing new leadership skills for the digital world, and creating virtual spaces where people can bond and support each other.

3. Recommendations based on ADKAR model

Digital transformation, propelled by rapid technological advancements, has become an crucial requirement for modern enterprises. In this digital era, organizations must adapt to evolving technologies and leverage digital means to empower their human resource management. While technology is increasingly accessible, implementing organizational change remains a significant challenge.

The ADKAR Model, a classic organizational change management tool developed by Prosci, offers a systematic solution to bridge this gap. This paper analyzes the process of digital transformation in enterprise HRM through the lens of the ADKAR Model and proposes actionable recommendations to facilitate a smooth and effective transition.

The ADKAR Model emphasizes five critical stages that individuals and organizations must navigate during transformation: Awareness, Desire, Knowledge, Ability, and Reinforcement. This model transforms abstract transformation goals into operational key nodes, forming a closed-loop management logic of "cognition-motivation-skill-practice-consolidation." By focusing on the coordinated evolution of individuals and organizations, the ADKAR Model provides a structured approach to digital HRM transformation.

3.1. Awareness stage: Establishing a shared understanding

The first stage of the ADKAR Model is Awareness, which aims to establish a shared understanding of the necessity and value of digital HRM. To achieve this objective, organizations should conduct training sessions, workshops, and internal communications to ensure that both management and employees recognize the importance of digital HRM transformation. Highlighting benefits such as improved efficiency (e.g., reduced recruitment cycles) and better service can help build a strong foundation for change. Additionally, developing a digital value map to visualize the end-to-end value creation chain, from employee self-service platforms to AI-driven interviews, can further enhance understanding.

3.2. Desire stage: Igniting intrinsic motivation

The second stage, Desire, focuses on igniting intrinsic motivation and enthusiasm for participation among employees and management. To achieve this, organizations can implement a dual-track incentive mechanism. Material incentives for active system users can provide tangible rewards for engagement. Spiritual incentives, like creating a digital transformation honor, can recognize and celebrate progress. Sharing success stories of employees solving HR challenges through digital tools can further inspire participation.

3.3. Knowledge stage: Equipping with comprehensive digital HR knowledge

The third stage, Knowledge, aims to equip employees and managers with comprehensive digital HR knowledge. Organizations should develop a three-dimensional training system to address different levels of expertise. The foundational layer can include micro-courses on digital tool operations. The intermediate layer can involve organizing data analysis workshops, with real-world HR case studies. The strategic layer can focus on seminars on digital ethics.

3.4. Ability stage: Translating knowledge into practical skills

The fourth stage, Ability, focuses on translating knowledge into practical skills for digital HR tasks. By engaging in hands-on practice, simulation exercises, and case study analysis, employees and managers can transform their acquired knowledge into practical operational skills, enabling them to proficiently use digital tools to complete human resource management tasks, such as recruitment, training, and performance evaluation.

3.5. Reinforcement stage: Sustaining and institutionalizing transformation outcomes

The final stage, Reinforcement, aims to sustain and institutionalize digital transformation outcomes. Establish a continuous monitoring and feedback mechanism to promptly identify and address issues that arise during the process of digital human resource management. Continuously optimize processes and system functionalities. At the same time, recognize and reward outstanding individuals and teams to consolidate the achievements of

digitalization efforts.

4. Conclusion

By systematically applying the ADKAR Model, enterprises can streamline their digital HR transformation journey, reduce implementation risks, and achieve measurable outcomes of data-driven decision-making. This framework balances technological adoption with organizational behavioral change, ensuring sustainable digital evolution. Through a structured approach that addresses awareness, desire, knowledge, ability, and reinforcement, organizations can successfully navigate the complexities of digital HR transformation and unlock the full potential of their human resources in the digital age.

About the author

JiaHu Huo, Intermediate Economist/Assistant Researcher in HR Department, Shenzhen Polytechnic University.

Funding

Research Project: A Study on Talent Classification and Evaluation System Oriented by Innovation Capability and Value Contribution: A Case of Shenzhen Polytechnic University.

Research Project No.: 7025310599.

References

[1] Li Yanping,Li Le,Hu Xiang.Digital Human Resource Management:Integration Framework and Research Prospects[J].Science & Technology Progress and Policy,2021,38(23):151-160.

[2] DESANCTIS,G.HUMAN-RESOURCE INFORMATION-SYSTEMS- A CURRENT ASSESSMENT[J]. MIS QUARTERLY, 1986, 10(1): 15-27.

[3] Strohmeier,S..Research in e-HRM: Review and implications[J].Human Resource Management Review, 2007,17(1):19-37.

[4] Oreg,Shaul et al.Change Recipients' Reactions to Organizational Change: A 60-Year Review of Quantitative Studies[J].THE JOURNAL OF APPLIED BEHAVIORAL SCIENCE,2011,47(4):461-524.

[5] Song Lifeng,Guo Hai,Yang Zhuen.Transformation of Traditional Management Theory Based on Digital Situation: Construction of Discourse System of Data-Based View[J].Science and Technology Management Research,2020,40(08):228-236.

[6] Jiang,Kaifeng et al.Clarifying the construct of human resource systems: Relating human resource management to employee performance[J].Human Resource Management Review,2012,22(2):73-85.

[7] Xie Xiaoyun,Zuo Yuhan,Hu Qiongjing.Human Resources Management in the Digital Era:A Human-Technology Interaction Lens[J].Management World,2021,37(01):200-216+13.DOI:10.19744/j.cnki.11-1235/f.2021.0013.

[8] Leonardi,Paul et al.Better PEOPLE Analytics Measure Who THEY KNOW, Not Just Who THEY ARE[J]. HARVARD BUSINESS REVIEW,2018,96(6):70-81.

[9] Buckingham,Marcus et al.Reinventing Performance Management[J].HARVARD BUSINESS REVIEW,2015,93(4):40-46.

[10] Ball,Kirstie et al.Electronic monitoring and surveillance in call centres: a framework for investigation[J].NEW TECHNOLOGY WORK AND EMPLOYMENT,2011,26(2):113-126.

[11] Leonardi,Paul et al.Social Media and the Development of Shared Cognition: The Roles of Network Expansion, Content Integration, and Triggered Recalling[J].ORGANIZATION SCIENCE,2018,29(4):547-568.

[12] Duggan,James et al.Algorithmic management and app-work in the gig economy: A research agenda for employment relations and HRM[J].HUMAN RESOURCE MANAGEMENT JOURNAL,2020,30(1):114-132.

[13] Stone,Dianna et al.Challenges and opportunities affecting the future of human resource management[J].Human Resource Management Review,2015,25(2):139-145.

[14] Kellogg,Katherine et al.ALGORITHMS AT WORK: THE NEW CONTESTED TERRAIN OF CONTROL[J]. ACADEMY OF MANAGEMENT ANNALS,2020,14(1):366-410.