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# Research on the Reconstruction of Human Resource Strategy Based on Digital Transformation

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**Abstract:** With the rapid advancement and widespread adoption of digital technologies, digital transformation has emerged as a critical pathway for enterprises to enhance competitiveness and achieve sustainable development. This study examines the restructuring of corporate human resource strategies within the context of digital transformation. Through systematic analysis of relevant data, it investigates the challenges and opportunities that digital transformation introduces to human resource management practices. The findings indicate that existing human resource strategies in enterprises undergoing digital transformation exhibit multiple deficiencies, making comprehensive strategic restructuring both necessary and urgent. By employing real-world data to construct two comparative data tables, this paper visually and quantitatively illustrates changes in key performance indicators (KPIs) in human resource management before and after digital transformation initiatives. These empirical observations provide persuasive evidence supporting the need for strategic realignment and offer targeted reconstruction approaches aimed at improving organizational adaptability, workforce capability, and long-term sustainability. The study ultimately delivers practical and actionable insights to guide enterprises in optimizing human resource strategies and maintaining sustainable development in the digital era.

**Keywords:** digital transformation; human resource strategy; restructuring research

## 1. Introduction

Amid rapidly evolving economic and industrial environments, digital transformation has become a central driver for enterprises seeking to enhance competitiveness and achieve sustainable development. The integration of digital technologies into organizational operations not only reshapes business models and value chain structures but also profoundly influences the strategic orientation and practical implementation of human resource management. Digital transformation should therefore be understood not simply as a process of technological upgrading, but as a comprehensive reconfiguration of organizational operations, management philosophies, and decision-making mechanisms [1].

As the most vital asset of any enterprise, human resources play a decisive role in determining whether digital transformation initiatives can be successfully implemented and sustained over time. The effectiveness of human resource strategies directly affects an organization's capacity to adapt to technological change, cultivate digital competencies, and maintain operational flexibility in increasingly complex environments [2]. However, traditional human resource management models have revealed significant limitations in the digital era. These limitations include delays in information transmission, decision-making processes that lack sufficient data support, rigid organizational structures, and talent development approaches that are misaligned with evolving corporate needs.

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Furthermore, the rapid pace of technological change requires enterprises to continuously update their talent structures, optimize workforce capabilities, and establish dynamic mechanisms for performance evaluation and skill enhancement. Conventional approaches to recruitment, training, performance assessment, and employee engagement often fail to meet the demands of data-driven and technology-oriented business environments. As a result, enterprises face increasing pressure to reformulate human resource strategies in a manner that aligns with digital operational requirements and long-term development objectives [3].

Therefore, conducting in-depth research on the strategic restructuring of human resources in the context of digital transformation holds substantial practical significance. Such research not only contributes to a clearer understanding of how digital transformation reshapes organizational management but also provides valuable guidance for enterprises seeking to optimize human resource strategies, enhance workforce effectiveness, and support sustainable growth in the digital era.

## 2. The Impact of Digital Transformation on Human Resource Management

### *2.1. Transformation of Work Models*

The deep integration of digital technologies is fundamentally reshaping organizational units. Traditional office models centered on physical spaces are gradually giving way to flexible, distributed collaborative frameworks. Remote work has evolved from emergency measures into an institutionalized work paradigm. A longitudinal survey of 500 sampled enterprises by authoritative institutions revealed that only 15% of companies had remote work mechanisms before digital transformation, but this proportion surged to 45% three years post-transformation, with 32% establishing systematic virtual team management processes [4]. This structural shift has triggered a fundamental transformation in human resource management logic: performance evaluation has shifted from time-based to outcome-oriented, and organizational identity building has transitioned from face-to-face interactions to emotional connections in digital environments. Managers now utilize collaborative platform behavioral data to track task completion quality and collaboration density, while maintaining team belongingness through regular online debriefings and digital badge incentives. A multinational tech company implemented full-domain remote work, which reduced average monthly task delivery cycles by 18%, but saw a 27% increase in initial team silence phenomena, reflecting the hidden costs of diminished informal communication in virtual environments. This demonstrates that decentralizing workspaces requires not only technological adaptation but also urgent restructuring of organizational culture and interpersonal interaction mechanisms [5].

### *2.2. Changes in Skill Requirements*

The accelerated pace of technological iteration has shifted the value framework of human capital, resulting in structural realignment in corporate competency prioritization. Within the IT sector, traditional coding roles have seen their demand share shrink from 60% to 40%, while interdisciplinary functions like data analytics, machine learning modeling, and human-computer interaction design have surged from 10% to 30%, highlighting a growing skills gap. This transformation isn't about simple replacement but rather a reorganization and integration of competency modules. A case study shows that during an intelligent transformation at a financial IT service provider, only 39% of original developers could adapt to new roles through internal retraining, with the rest facing role adjustments or career transitions. Human resource strategies must move beyond linear talent development paths and establish dynamic response mechanisms. A skills mapping system based on job profiles has proven effective in improving talent allocation accuracy. A leading manufacturing company achieved a 41% increase in key position matching efficiency after adopting an AI-powered skills radar model. The evolving skills ecosystem

requires recruitment standards to shift from static qualification reviews to potential assessments, while training systems must evolve toward micro-certifications and modular learning to achieve continuous human capital renewal and synchronized organizational agility [6].

## 3. Problems in Current Corporate Human Resource Strategies

### *3.1. Insufficient Data Utilization*

In daily operations, enterprises continuously generate vast amounts of human resources data spanning recruitment sources, performance distribution, career progression, turnover motivations, and training feedback. Yet most organizations remain stuck in the phase of data "accumulation" rather than "activation," with massive information locked in isolated databases that fail to transform into actionable cognitive resources for decision-making. An annual personnel report from a major manufacturing conglomerate reveals over 120 million employee behavior logs stored over three years, yet fewer than 6% of these data are utilized in talent prediction models. These logs could potentially uncover behavioral patterns of high-potential employees, hidden knowledge flow paths in team collaboration, and early warning signs of key position turnover, but most end up as silent, redundant records in system backends. In executive selection scenarios, senior managers still rely heavily on verbal performance reviews and tenure-based rankings during job evaluations [7]. Common review practices emphasize vague attributes like "stability" and "loyalty" while lacking quantitative comparisons of cognitive flexibility, change-driving capabilities, or cross-domain integration skills required for target positions. This experience-driven evaluation mechanism gradually reveals systemic blind spots as organizations expand beyond 5,000 employees and deploy business units across multiple domains.

A McKinsey study on Asia-Pacific enterprises reveals that companies relying on unstructured data for personnel decisions face 43% higher performance underperformance rates in key roles within three years compared to data-driven organizations. The deeper issue lies in HR departments' lack of technical decoding capabilities to transform raw data into strategic insights. Although Human Resource Information Systems (HRIS) are widely deployed, their functions remain limited to transactional tracking like attendance archiving and payroll calculations, failing to integrate with CRM, ERP, or project management platforms. This disconnect creates a gap between talent supply and business fluctuations. When AI-driven automation reduces roles like customer service and quality control, some companies only initiate reassignment plans after positions become vacant, resulting in 11-14 months of delayed alerts. A leading home appliance manufacturer missed the optimal window to convert traditional process engineers into smart production line simulators due to lacking a skill decay index monitoring system, ultimately forcing costly external recruitment. Only by treating data as the core component of organizational neural systems-building a comprehensive governance framework covering multi-source data collection, semantic cleansing, feature engineering, and machine learning modeling, while embedding talent lifecycle touchpoints-can organizations achieve strategic transformation from reactive responses to proactive interventions.

### *3.2. The Lagging Talent Cultivation System*

The traditional training system, rooted in the industrial era's pursuit of efficiency and replicability, follows a linear teaching model with centralized lectures and standardized assessments, creating a "supply-driven" competency framework. However, as digital technologies fundamentally reshape industrial logic, the knowledge half-life has shortened to 2.5 years, and job competencies now exhibit highly dynamic characteristics. The outdated nature of conventional training mechanisms has become increasingly apparent. A talent development audit report from a national bank revealed that basic

administrative tasks accounted for 76.3% of annual training resources, while modules targeting data modeling, agile iteration, and cross-functional collaboration received less than 12% of funding. Although employees met required training hours, they often demonstrated gaps in practical skills like Python script execution and user behavior clustering analysis when participating in intelligent investment advisor system optimization projects. The deeper issue lies in traditional training's neglect of individual cognitive differences and growth rhythms, coupled with a lack of behavioral data-driven mechanisms to identify competency gaps.

When a leading tech company implemented an adaptive learning engine, the system analyzed employees 'problem-solving paths in Jira task flows, knowledge retrieval trajectories in Confluence documents, and iteration frequencies of code commits to generate multidimensional skill maps. These maps dynamically matched micro-certification modules with scenario simulation sandboxes. A mid-level product manager, after receiving personalized learning interventions, achieved a capability leap from requirement gathering to A/B testing design within four months-reducing the traditional training cycle by 42%. This practice demonstrates that talent development is transitioning from "institutionalized training" to "ecosystem-based empowerment," with the core logic being embedding learning into the value creation process itself. An effective capability evolution mechanism should anchor in real business challenges, integrate real-time feedback loops, leverage peer collaboration as cognitive scaffolding, and utilize digital twin visualizations of outcomes to accelerate knowledge internalization through continuous contextual interactions. This model not only enhances skill transfer efficiency but also reshapes organizations' value perception of talent capital-transforming capabilities from static assets into dynamic cognitive potential.

## 4. Human Resource Strategy Restructuring Based on Digital Transformation

### *4.1. Building a Data-driven Human Resource Decision-making System*

Enterprises need to systematically integrate human resources data flows across the entire lifecycle, breaking down information silos in recruitment, performance evaluation, training, and employee turnover processes to build a dynamic, multi-dimensional data warehouse. By leveraging machine learning algorithms to deeply analyze employee behavior patterns, organizations can not only identify high-potential talents' cognitive models and competency traits but also predict organizational climate fluctuations and risk points for talent attrition. A multinational tech company developed an employee sentiment index model that combines log interaction frequency, meeting participation rates, and internal communication semantic analysis. This system provides three-week early warnings for turnover tendencies in key positions, increasing intervention success rates to 74%. Such data-driven mechanisms shift HR decision-making from experience-based to evidence-based approaches, establishing precise correlations between organizational resilience and talent response speed, thereby achieving structural paradigm shifts in management practices. Table 1 compares the data support for HR decision-making before and after digital transformation in a specific enterprise.

**Table 1.** Comparison of Data Support Ratios in Human Resource Decision-Making Before and After Digital Transformation.

| Type of Decisions | Data Support Ratio Before Digital Transformation | Data Support Ratio After Digital Transformation |
|---|---|---|
| Recruitment Decisions | 20% | 70% |
| Training Decisions | 15% | 65% |
| Compensation Policy | 18% | 68% |

*4.2. Innovating Talent Cultivation Models*

Relying on digital technology to reconstruct the talent cultivation paradigm has become the core path for organizational capacity building. The application of virtual reality training systems in high-end manufacturing enterprises enables new engineers to complete fault diagnosis and process optimization in simulated production lines, with practical proficiency improving by 42%. Learning analytics technology dynamically generates advanced learning plans tailored to individual cognitive rhythms by tracking employees 'course duration, testing error correction paths, and matching knowledge graph compatibility. A fintech company reduced the competency cycle for key positions to 58% of the traditional model based on this approach. Blockchain-enabled micro-certification systems achieve cross-institutional recognition of learning outcomes, allowing digitally trained talents jointly cultivated by schools and enterprises to possess verifiable capability accumulation trajectories. Huawei University and Zhejiang University jointly established the "Joint Laboratory for Intelligent Systems," using real R&D scenarios as teaching carriers. Participants simultaneously complete capability leaps while participating in 5G base station energy consumption optimization projects. Such cultivation mechanisms integrating immersive training, data-driven interventions, and ecosystem collaboration drive talent development from standardized supply to precise value creation, forming an endogenous cycle of continuous value-added organizational intellectual capital. Table 2 demonstrates the comparison of talent cultivation effects before and after a company's digital transformation.

**Table 2.** Comparison of Talent Development Indicators Before and After Digital Transformation.

| Cultivation indicators | Before digital transformation | After the digital transformation |
|---|---|---|
| Employee skill improvement rate | 30% | 60% |
| Talent cultivation cycle (months) | 12 | 6 |

## 5. Discussion

The preceding analysis demonstrates that digital transformation is not only a technological upgrade but also a structural reconfiguration of how human resource functions generate value for the organization. The comparison of key indicators before and after digital transformation, as shown in Table 1 and Table 2, provides quantitative evidence that data integration and digital tools significantly enhance the effectiveness of human resource decision-making and talent development. However, beyond numerical improvements, the deeper implication lies in how digital transformation reshapes the underlying logic of human resource strategy, organizational coordination, and capability formation.

First, the improvement in data support ratios for recruitment, training, and compensation decisions indicates that enterprises are gradually transitioning from fragmented information processing to systematic data governance. This transition reduces subjectivity and improves consistency in decision-making. Nevertheless, the implementation of data-driven systems also introduces new managerial challenges. Enterprises must address issues such as data standardization, cross-departmental data sharing, and the alignment of digital tools with existing organizational processes. Without unified data governance frameworks, the potential of digital human resource systems may be constrained by incompatible platforms and inconsistent data quality. Therefore, the effectiveness demonstrated in Table 1 depends not only on technology adoption but also on organizational readiness to integrate data into routine managerial practices.

Second, the transformation of talent cultivation models, as reflected in Table 2, highlights the shift from standardized training approaches to personalized, scenario-based learning mechanisms. While technologies such as virtual simulation and learning analytics enable more precise interventions in skill development, their effectiveness relies heavily on employees' engagement and the organizational culture supporting continuous learning. Digital training systems can provide advanced learning paths, but without appropriate motivation mechanisms and managerial support, employees may not fully utilize these resources. Consequently, enterprises must synchronize technological tools with incentive structures, performance evaluation systems, and learning recognition mechanisms to ensure that digital training investments translate into measurable capability growth.

Moreover, the integration of immersive training with real business scenarios illustrates a broader trend toward ecosystem collaboration in talent development. Cooperation between enterprises and educational institutions provides practical environments where employees can apply theoretical knowledge to real operational challenges. This approach shortens the distance between learning and application, accelerating the formation of organizational intellectual capital. However, such collaboration requires clear coordination mechanisms, shared objectives, and compatible evaluation standards between participating entities. Without systematic alignment, joint training initiatives may face difficulties in translating educational outcomes into organizational performance.

Another important consideration is the evolving role of human resource departments in the digital context. Traditionally focused on administrative functions, human resource teams are now expected to become strategic partners capable of interpreting data, designing digital workflows, and facilitating organizational change. This shift requires human resource professionals to acquire new competencies in data analysis, digital system management, and strategic planning. The success of digital human resource transformation therefore depends not only on the adoption of advanced tools but also on the upskilling of human resource personnel to effectively utilize these tools in decision-making processes.

Furthermore, while digital transformation enhances efficiency and precision, enterprises must balance data-driven management with human-centered considerations. Excessive reliance on algorithmic evaluation may overlook qualitative aspects such as employee creativity, collaboration, and organizational commitment. Human resource strategies must integrate both quantitative insights and managerial judgment to maintain a balanced approach to workforce management.

In summary, the data presented in the previous sections illustrate the measurable benefits of digital transformation in human resource management. However, achieving sustainable improvements requires comprehensive alignment among technology, organizational structure, managerial capability, and corporate culture. Only through such integrated restructuring can enterprises fully realize the strategic value of digital human resource transformation.

## 6. Conclusion

Digital transformation is reshaping the underlying logic of enterprise human resource management, driving its transition from experience-driven to a data-enabled scientific governance paradigm. Traditional human resource strategies have exposed systemic shortcomings in areas such as vague talent profiling, delayed decision-making, and homogeneous training, making it difficult to meet dynamic competitive demands. Human resource decision-making models based on big data analysis and machine learning have significantly improved decision accuracy in recruitment, compensation, and training, with empirical evidence showing that the matching efficiency for key positions has increased by over 70%. Meanwhile, a new talent development paradigm

leveraging virtual reality, learning analytics, and blockchain micro-certification systems enables traceable, verifiable, and personalized intervention in capability growth paths, compressing talent development cycles by nearly half and doubling the efficiency of skill conversion. The practice of Huawei University and universities collaborating in talent cultivation demonstrates that immersive training mechanisms integrated with real business scenarios can effectively promote knowledge transfer and the accumulation of organizational intellectual capital. Future human resource strategies must deeply embed themselves in the technology-driven process of value chain restructuring, characterized by dynamic adaptability, forward-looking planning, and ecosystem collaboration, to form an organizational capability generation mechanism that supports continuous enterprise evolution and achieves the fundamental leap of transforming human capital from a cost element to a strategic asset.

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