Original Article

Role of HR in the Digital Transformation of Traditional Businesses with the Help of Information Technology

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Abstract

Digital transformation has emerged as a strategic imperative for traditional businesses seeking to survive and compete in an increasingly technology-driven environment. This research paper examines the pivotal role of Human Resources (HR) in enabling digital transformation through the effective use of information technology (IT). It highlights how HR has evolved from an administrative support function to a strategic partner responsible for workforce planning, cultural transformation, skill development, and technology adoption (Davenport & Ronanki, 2018). The rapid advancement of digital technologies has significantly reshaped organizational structures, processes, and work practices, compelling traditional enterprises to rethink their operational models. Digital transformation extends beyond the mere adoption of advanced technologies; it involves fundamental changes in organizational culture, leadership approaches, and employee capabilities (Fountaine et al., 2019). In this context, HR plays a central role in aligning human capital strategies with digital business objectives and ensuring that employees are prepared to adapt to technological change. As organizations increasingly adopt technologies such as cloud computing, artificial intelligence, automation, and data analytics, HR is responsible for developing a digitally competent workforce. The use of Human Resource Information Systems (HRIS), e-recruitment platforms, and learning management systems enables HR to enhance talent acquisition, support continuous learning, and improve workforce planning through data-driven insights (Upadhyay & Khandelwal, 2018; Tursunbayeva et al., 2018). These IT-enabled HR practices contribute to improved productivity, reduced operational costs, and enhanced employee engagement. The paper further emphasizes HR's role in managing change and minimizing resistance associated with digital initiatives. Traditional businesses often encounter challenges such as employee anxiety, skill gaps, and cultural resistance during digital transformation. HR addresses these challenges by implementing structured change management programs, promoting transparent communication, and fostering a culture of continuous learning and innovation (Stone et al., 2015). By acting as a bridge between management, employees, and technology, HR facilitates smoother adoption of digital tools and processes. Additionally, the integration of IT in HR enhances employee experience through digital self-service portals, real-time performance management systems, and continuous feedback mechanisms. HR analytics supports strategic decision-making by providing insights into employee behavior, engagement levels, and turnover patterns, thereby strengthening organizational performance (Deloitte, 2020). Despite its advantages, HR-led digital transformation presents challenges, including data privacy concerns, the need for continuous technological upgrades, and the requirement for upskilling HR professionals. Addressing these issues requires sustained investment in HR technology and close collaboration between HR and IT functions (Rodgers et al., 2023). In conclusion, the study establishes that successful digital transformation in traditional businesses is highly dependent on the strategic involvement of HR. By effectively leveraging information technology, HR enables organizations to build a future-ready workforce, enhance adaptability, and sustain long-term organizational performance in an increasingly digital business environment (Kar et al., 2021).

Keywords: *Human Resource Management, Digital Transformation, Information Technology, HR Analytics, Change Management, Traditional Businesses*

Introduction

In today's rapidly evolving business environment, digital transformation has become a strategic necessity for organizations across all industries. Traditional businesses, which have historically relied on conventional operational models and manual processes, are increasingly compelled to adopt digital technologies to enhance efficiency, competitiveness, and customer satisfaction.

Digital transformation refers to the integration of information technology into core business activities, leading to fundamental changes in organizational processes, structures, culture, and value creation mechanisms (Vial, 2019). Human Resources (HR) plays a critical role in supporting and driving this transformation by aligning workforce capabilities with technological advancements. As organizations implement digital tools such as automation, data analytics, artificial intelligence, and cloud-based systems, HR becomes responsible for preparing employees to adapt to these changes through skill development, reskilling, and continuous learning initiatives (Marler & Parry, 2016). Consequently, the role of HR has evolved from an administrative support function to that of a strategic partner involved in talent acquisition, change management, and performance optimization (Ulrich et al., 2012). Information technology enables HR to enhance efficiency and effectiveness through digital recruitment platforms, Human Resource Information Systems (HRIS), and online learning management systems. These IT-enabled HR practices support data-driven decision-making, improve workforce planning, and foster employee engagement by creating more transparent and responsive HR processes (Stone et al., 2015). By leveraging digital tools, HR contributes to building an agile and future-ready workforce capable of responding to technological disruptions and evolving business demands.

In the twenty-first century, digital transformation has emerged as a powerful force reshaping industries, business models, and workplace dynamics. Traditional organizations face challenges such as resistance to change, skill gaps, and cultural rigidity while transitioning toward digital operations. HR plays a pivotal role in overcoming these challenges by promoting a culture of innovation, facilitating effective communication, and supporting leadership during periods of organizational change (Kotter, 2012). This paper examines the role of Human Resources in the digital transformation of traditional businesses with the support of information technology. It highlights how HR functions as a strategic enabler by integrating people management practices with digital initiatives to achieve sustainable organizational growth and long-term competitive advantage (Davenport & Ronanki, 2018).

Literature Review

1. Digital Transformation Defined

Digital transformation refers to the comprehensive integration of digital technologies into all areas of an organization, resulting in fundamental changes to business operations, value creation, and customer engagement. It goes beyond the mere adoption of digital tools and involves a strategic reorientation of organizational culture, processes, and leadership approaches (Vial, 2019). Scholars emphasize that digital transformation requires organizations to rethink how technology, people, and workflows interact to achieve long-term business objectives (Westerman et al., 2014). Traditional businesses undergoing digital transformation often face structural and cultural challenges, making people management a critical success factor (Kane et al., 2015).

2. HR's Evolving Role in Digital Transformation

The role of Human Resources has undergone significant transformation in the digital era. Earlier studies positioned HR as an administrative function focused primarily on payroll, compliance, and record-keeping. However, recent literature highlights HR's evolution into a strategic partner responsible for enabling organizational change and innovation (Ulrich et al., 2012). In digitally transforming organizations, HR plays a dual role by managing core HR functions such as recruitment, training, and performance management while simultaneously leading workforce transformation initiatives (Marler & Parry, 2016).

Researchers argue that HR's strategic involvement is essential for aligning human capital with digital business strategies. HR contributes to workforce agility by identifying future skill requirements, facilitating digital upskilling, and promoting continuous learning cultures (Bersin, 2019). Moreover, HR supports change management by addressing employee resistance, improving communication, and fostering digital readiness across all organizational levels (Kotter, 2012).

3. Role of Information Technology in HR

Information Technology has become a foundational enabler of modern HR practices. The use of Human Resource Information Systems (HRIS), Artificial Intelligence (AI)-based recruitment tools, e-learning platforms, and digital performance management systems has transformed how HR functions operate (Stone et al., 2015). These technologies help automate routine tasks, reduce administrative burden, and improve process efficiency. IT-enabled HR systems also facilitate data-driven decision-making by providing analytics related to employee performance, engagement, turnover, and training effectiveness (Tursunbayeva et al., 2018). AI-driven recruitment tools enhance candidate screening and selection accuracy, while digital learning platforms support personalized skill development and career progression (Davenport & Ronanki, 2018). As highlighted in existing literature, the strategic use of IT in HR not only improves operational efficiency but also enhances employee experience and organizational performance (Marler & Fisher, 2013).

Research Objectives

1. To identify how HR contributes to digital transformation in traditional businesses.
2. To analyze the role of information technology in enhancing HR functions.
3. To assess the challenges and opportunities in HR-driven digital transformation.

Methodology

The present study adopts a qualitative research approach to examine the role of Human Resources in the digital transformation of traditional businesses with the support of information technology. A qualitative approach is considered appropriate as it enables an in-depth understanding of concepts, practices, and organizational dynamics related to HR-led digital transformation (Creswell, 2014). The research is primarily based on secondary data, which has been collected from scholarly journals, academic books, peer-reviewed research articles, industry reports, and credible online sources focusing on human resource management, information technology, and digital transformation. A descriptive research design is employed to analyze existing theories, models, and best practices associated with HR's strategic involvement in digital transformation initiatives. Descriptive research is useful for systematically describing phenomena and interpreting existing knowledge without manipulating

variables (Sekaran & Bougie, 2016). This design allows the study to examine how HR functions evolve in response to technological advancements and how IT-enabled HR practices influence organizational performance. To strengthen conceptual understanding, analytical frameworks such as SWOT analysis and comparative analysis are applied. SWOT analysis assists in identifying the strengths, weaknesses, opportunities, and threats associated with the adoption of digital HR practices, while comparative analysis enables the evaluation of traditional HR approaches against technology-driven HR models (David & David, 2017). These frameworks help assess the strategic impact of digital technologies on HR functions and business outcomes. The study focuses on key HR practices, including digital recruitment, e-learning and training systems, HR analytics, and change management strategies, and evaluates their contribution to successful digital transformation. The collected data is systematically reviewed, categorized, and interpreted to identify emerging trends, challenges, and best practices in HR-enabled digital initiatives (Vial, 2019). Overall, this methodological approach facilitates a comprehensive understanding of the opportunities and challenges involved in integrating Human Resources and information technology within traditional business environments. The insights derived from this study contribute to existing literature and provide a foundation for future empirical research in the area of HR-driven digital transformation (Marler & Parry, 2016).

Findings and Analysis
HR as a Strategic Partner in Digital Transformation

The findings of the study indicate that Human Resources plays a central strategic role in aligning organizational objectives with digital transformation initiatives. Rather than functioning solely as an administrative unit, HR collaborates closely with IT and top management to assess digital capability requirements and design competency frameworks that guide recruitment, training, and succession planning. Strategic workforce planning enables organizations to ensure the availability of critical digital skills both in the present and for future business needs (Ulrich et al., 2012; Marler & Parry, 2016).

1. **Workforce Planning and Talent Acquisition**

Digital transformation has significantly altered workforce planning and talent acquisition practices. HR departments increasingly rely on digital platforms and analytics to forecast skill requirements, source candidates through online channels, and implement AI-based screening tools to improve candidate-role alignment. These technologies allow organizations to shift from reactive hiring practices to proactive talent pipeline development, improving both hiring efficiency and workforce quality (Davenport & Ronanki, 2018; Bersin, 2019).

2. **Digital Competency Development**

The analysis reveals that HR plays a vital role in developing digital competencies through technology-enabled learning systems. E-learning platforms, virtual classrooms, and mobile learning applications support continuous skill development and help reduce workforce skill gaps. Emerging tools such as gamification and virtual reality (VR) enhance engagement and knowledge retention, preparing employees to work effectively in digitally transformed environments (Stone et al., 2015; McKinsey Global Institute, 2018).

HR's Role in Facilitating Change Management

Digital transformation initiatives often encounter resistance arising from fear of job displacement, limited digital literacy, and deeply rooted organizational cultures. The findings suggest that HR leads change management efforts by promoting transparent communication, involving employees in transformation initiatives, and creating digital champions within teams. These practices help build trust, reduce resistance, and encourage acceptance of new technologies and workflows (Kotter, 2012; Kane et al., 2015).

Enhancing Employee Experience through Information Technology

The study finds that information technology significantly enhances employee experience by enabling efficient and user-friendly HR services. Self-service portals allow employees to access payroll information, benefits, and schedules independently, increasing transparency and satisfaction. Real-time performance analytics and digital dashboards support continuous performance monitoring and goal alignment, while digital feedback platforms encourage ongoing communication between employees and managers (Bersin, 2019; Deloitte, 2020).

Data-Driven Human Resource Management

The adoption of HR analytics enables organizations to move toward evidence-based HR decision-making. By analyzing data related to employee turnover, training effectiveness, productivity, and engagement, HR professionals can identify patterns and implement proactive interventions. These insights support strategic planning and improve organizational outcomes by aligning HR initiatives with business objectives (Tursunbayeva et al., 2018; Marler & Fisher, 2013).

Challenges in HR-Led Digital Transformation

Despite the benefits of digital HR practices, several challenges were identified. A key concern is the lack of digital competencies among HR professionals, which may slow the pace of transformation. Resistance to change from employees and leadership also remains a significant barrier. Additionally, the increasing reliance on digital HR systems raises concerns related to data privacy, security, and regulatory compliance, highlighting the need for strong data governance frameworks (Stone et al., 2015; Vial, 2019).

Case Examples
Case 1: Digital Transformation in a Traditional Manufacturing Firm

A mid-sized traditional manufacturing firm serves as an illustrative example of HR-led digital transformation. The organization implemented a Human Resource Information System (HRIS) to centralize employee data, automate talent

management processes, and support workforce planning. In addition, e-learning platforms were introduced to enhance digital upskilling among employees, while automated performance management systems enabled continuous monitoring of employee performance.

Human Resources played a leading role in designing and implementing training programs aimed at improving digital literacy across different organizational levels. Within a period of twelve months, the firm reported a measurable reduction in skill gaps and improved employee readiness to adopt digital tools. These outcomes are consistent with findings in prior research, which highlight the importance of HR-driven learning and development initiatives in supporting digital transformation within traditional industries (Stone et al., 2015; McKinsey Global Institute, 2018).

Case 2: Digital Transformation in a Traditional Retail Chain

A traditional retail chain provides another example of how HR facilitates digital transformation through information technology. The organization adopted **mobile workforce scheduling applications** and **AI-based recruitment tools** to improve operational efficiency and enhance the employee experience. HR redesigned job roles and competency frameworks to emphasize digital skills, adaptability, and customer-centric capabilities.

The integration of AI-powered recruitment tools enabled faster candidate screening and reduced recruitment cycle time, while mobile scheduling applications improved workforce flexibility and employee satisfaction. HR's strategic involvement in aligning job design, talent acquisition, and digital tools contributed to higher employee engagement levels and improved staffing efficiency. These findings align with existing literature that emphasizes HR's role in leveraging digital technologies to transform workforce management in service-oriented sectors (Davenport & Ronanki, 2018; Bersin, 2019).

Conclusion

The findings of this study highlight that Human Resources plays a foundational and strategic role in enabling the digital transformation of traditional businesses. By integrating human capital strategies with advanced information technologies, HR supports organizations in navigating technological disruption while sustaining operational efficiency and workforce engagement. The evolution of HR from an administrative function to a strategic change agent is essential for aligning digital initiatives with organizational objectives (Ulrich et al., 2012). Strategic workforce planning, digital skill development, and the adoption of IT-enabled HR systems allow organizations to build agile and future-ready workforces. HR-led initiatives such as digital recruitment, e-learning platforms, and data-driven performance management enhance productivity and support continuous learning, which are critical for long-term competitiveness in the digital era (Stone et al., 2015; Marler & Parry, 2016). Additionally, HR's involvement in change management helps address employee resistance, foster cultural adaptability, and promote acceptance of new technologies (Kotter, 2012). The study also underscores the importance of HR's leadership in ensuring ethical and responsible use of digital technologies. As organizations increasingly rely on data-driven HR systems, HR must ensure transparency, data security, and compliance with regulatory standards to maintain employee trust and organizational integrity (Vial, 2019; Davenport & Ronanki, 2018). In conclusion, for traditional businesses to succeed in a digitally driven environment, Human Resources must assume a leadership role in guiding both cultural and technological transitions. By leveraging information technology strategically, HR can enable sustainable digital transformation, enhance employee experience, and contribute significantly to long-term organizational performance.

Conflicts of interest
The authors declare that there are no conflicts of interest regarding the publication of this paper.

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