



## Digital Transformation in Human Resource Management: Literature Review on Effectiveness and Implementation Challenges

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**Abstract.** *Human resource managements digital makeover-now a staple of post COVID work life pushes big shifts across firms. Research piles up showing that adding tech to payroll, hiring, or talent reviews boosts speed, lets staff set flexible hours, and sharpens a companys edge. Yet those gains hinge on three building blocks: solid IT pipes, workers who feel at home online, and a culture that values learning-by-linking screens rather than guarding silos. Public bodies and firms in emerging economies run into familiar hurdles-resistance to new ways, knowledge gaps, and tight budgets paid with taxpayer pounds. At the same time, the digital leap invites richer learning loops, a bolder brand image, and faster bursts of innovation as smart-working platforms take center stage. Based on this cross-case look, success calls for one big plan that stitches tech road maps, ongoing staff training, and revised rules into a single fabric. Leaders wishing to boost results through resilient, people-centered digitization will find these pointers practical and timely.*

**Keywords:** *Digital Transformation, e-HRM, Digital Competence, Smart Working.*

### 1. LATAR BELAKANG

Across nearly every industry-and notably in human resource management-the march toward digital transformation now appears unavoidable. Adoption of technology in HR has sped up sharply since the COVID-19 pandemic forced many offices to go remote. As a result, firms must adjust rapidly if they wish to thrive in an ever-changing, online workplace (Al-Alawi et al., 2023).

The integration of digital tools into human resource management, commonly labelled e-HRM, permits firms to automate routine tasks, rely on data for decision making, and, as a result, boost overall efficiency and productivity (Al-Alawi et al., 2023). Yet the journey toward this kind of digital transformation is rarely trouble-free; organizations still encounter a range of logistical, cultural, and technical hurdles as they try to put the system in place.

A key hurdle remains the uneven level of digital know-how found among staff. Although the demand to upskill workers in technology grows, many firms-situated mainly in services and manufacturing struggle to lift their peoples digital competence (Mazurchenko & Zelenka, 2022). Research indicates that true digital transformation goes far beyond swapping hardware or software; it requires sweeping adjustments to culture, mindset, structure, and the webs of social interaction inside the workplace (Straková et al., 2022). As a result, human-resources modernization rests largely on how thoroughly the entire organization is prepared to embrace this broad shift.

Conversely, digital transformation can yield a competitive edge by fostering new knowledge, streamlining operations, and enhancing the institutions public image (Bernini

et al., 2022). Such gains matter most in finance and service sectors where trust and strong stakeholder relations are indispensable. Yet, despite the obvious payoffs for HR, actual roll-out remains patchy, particularly across many developing nations. Low digital uptake in these contexts generally stems from fragile tech infrastructure, scarce backing from top leaders, and everyday resistance among staff (Amoah et al., 2023).

In public administration, the move toward smart working as part of broader digital change illustrates a double-edged sword; while it grants agencies greater internal flexibility, it also muddies the lines between work and home life and can strain employees balance (Todisco et al., 2023). The COVID-19 crisis acted as a powerful catalyst, compelling many public bodies to digitize human-resource tasks almost overnight simply to keep services running. Yet research shows that this hurried shift frequently occurs without thorough planning or the change-management tools needed to support staff and sustain long term success (Al-Alawi et al., 2023).

Within an organizations learning ecosystem, a purposeful digital shift can stimulate both ongoing learning and the generation of fresh insights. Digital tools thus act as a catalyst, speeding up how quickly knowledge is gathered and shared across the firm (Schönherr et al., 2023). Yet the impact of such transformation in human resource management ultimately hinges on an intricate interplay of internal elements-organizational culture, technological preparedness, and sustained leadership backing-and external forces including regulatory demands and competitive market pressures (Amoah et al., 2023).

A thorough survey that maps the wide range of research already published in this area is required if scholars and practitioners are to grasp both the successes and the hurdles linked to putting digital transformation into action within human-resource management. A systematic literature review offers a sound method for uncovering gaps, tracking emerging trends, and identifying sector- or region-specific best practices in HR digitalization.

Drawing on this context, the present investigation undertakes a systematic literature review that focuses on both the successes and the obstacles encountered when human-resource management undergoes digital transformation. Findings from the review should yield insights that are useful to scholars and practitioners alike, guiding the design of sustainable, flexible strategies for HR digitalization that can keep pace with an ever evolving workplace.

## **2. THEORETICAL STUDY**

### **Digital Transformation in Organizations**

Digital transformation refers to the deliberate integration of digital tools within an organization, aimed at boosting efficiency, generating fresh sources of value, and preserving a competitive edge (Vial, 2021). Such an undertaking triggers wide-ranging shifts in organizational structure, workplace culture, core business processes, and the competencies expected of human-resources teams (Straková et al., 2022). Within HR, digitalization reaches beyond mere automation; it also re-architects everyday interactions with staff by leveraging online platforms and data-driven insights.

### **Electronic Human Resource Management (e-HRM)**

Electronic Human Resource Management, commonly abbreviated as e-HRM, describes the application of information and communication technologies in crafting, executing, and overseeing an organizations human resource policies (Bondarouk & Ruël, 2009). A digitally transformed HR function now encompasses web-based recruitment

portals, app-driven performance management, e-learning modules, and analytics that inform high-level strategic choices.

### **Effectiveness of Digital Transformation in Human Resource Management**

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### **Tantangan Implementasi Digitalisasi Sumber Daya Manusia**

Key challenges in HR digital transformation include employee resistance, lack of digital competency, limited IT infrastructure, and lack of digital culture integration (Amoah et al., 2023). In developing countries, limited resources and managerial understanding of the strategic value of digitalization are significant barriers.

### **The Role of Employee Digital Competence**

Digital competence now sits at the heart of any successful firms on going shift into the online arena. Sustained training that builds those skills keeps staff engaged, sharpens their confidence, and boosts overall productivity. (Mazurchenko & Zelenka, 2022).

### **Smart Working and Organizational Flexibility**

Smart working as a form of digitalization allows flexibility in time and place of work. The study by Todisco et al., (2023) shows that although smart working increases efficiency, it also presents a dilemma of work-life balance and the right to "disconnect" from work.

### **Organisational Learning and Digitalisation of Human Resources**

Digital transformation often sparks rapid, on-the-ground learning within an organization. As new tools and workflows are adopted, the knowledge gained and shared during that shift both builds a store of experience and sharpens the firms ability to adapt and innovate (Schönherr et al., 2023).

## **3. RESEARCH METHODS**

The method employed in this study is a focused literature review. The work began with a keyword-driven search for journal articles discussing digital transformation within human-resource management. Inclusion criteria restricted the sample to papers published between 2022 and 2025 in international journals indexed by Scopus and used the search terms digital AND transformation and human AND resources. Conducted on the Scopus website, the initial query returned 1950 records; 287 articles met a preliminary relevance screen, and 25 were subsequently judged to fall short of the inclusion criteria. After further review, 6 journals remained whose content aligned with both the eligibility rules and the aims of the present research.

## **4. RESULTS AND DISCUSSION**

No.	Journal Name & Year	Research Title	Research Variables	Research Methods	Research Result
1.	Al-Alawi et al. (2023)	Digital Transformation Adoption in Human Resources Management during COVID-19	Five principal factors encourage firms to adopt e-HRM: a reliable IT	Quantitativ; Survey; Logistic regression analysis	All variables have a positive effect on e-HRM

			backbone, adequate funding, visible backing from top managers, widespread digital know-how among staff, and a culture open to digital change.	on HR in Bahrain	adoption; organizations need to invest in technology and human resources for effective HR digitalization.
2.	Mazurchenko & Zelenka (2022)	Employees' Digital Competency Development in the Construction and Automotive Industrial Sectors	Digital competence, training, industrial sector, response to the COVID-19 pandemic	Quantitative (CAWI); Descriptive statistics and chi-square test; plus qualitative interviews	Most firms still trip over themselves trying to lift their digital skills; training courses are patchy at best; the car industry updates its tools faster than the building trade.
3.	Straková et al. (2022)	Opportunities and Threats of Digital Transformation of Business Models in SMEs	Core and supporting business processes; level of digitalization; digitalization strategy	Quantitative; Logistic regression & dimensionality reduction on 496 SMEs in manufacturing & services sectors	Many small and medium-sized enterprises pursue digitalisation feverishly in core functions but leave HR and other backbone

					processes woefully undeck.
4.	Todisco et al. (2023)	The Bright and Dark Side of Smart Working in the Public Sector	Smart working, Work-life balance, Organizational flexibility, Well-being, Communication technology	Qualitative; In-depth interviews with 27 Italian public sector employees (pre and post COVID-19)	Although smart working enhances flexibility and productivity, it can likewise elevate stress and disrupt the work-family balance when boundaries remain unclear.
5.	Schönherr et al. (2023)	Organisational Learning and Sustainable Tourism: The Enabling Role of Digital Transformation	Organisational learning, Digital transformation, Sustainability, Executive education	Qualitative; 30 interviews with tourism actors in executive development programs	Digital transformation drives organizational learning, increases digital competencies, and contributes to sustainability through digital innovation.
6.	Amoah et al. (2023)	Deficit of Digital Orientation among Service-Based Firms in an Emerging Economy	Digital orientation, Knowledge gap, Cost burden, Technology adaptation,	Quantitative; Survey of 466 respondents in Ghana (service-based services)	Lack of digital orientation is due to budget constraints, low training,

			ICT investment		and organizational resistance; increased investment in ICT and digital training is needed.
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In recent years, digital transformation in human resource management (HRM) has emerged as a pressing area of interest, spurred by demands for greater operational efficiency, workplace flexibility, and enhanced organizational competitiveness. A broad range of scholarly studies now presents contrasting perspectives on both the advantages gained and the obstacles confronted when HR functions pursue such digital change.

### **Human Resource Management Technology**

A recent study by Al-Alawi and colleagues Al-Alawi et al. (2023) illustrates how technology can enhance human-resource management. Investigating Bahraini firms during the COVID-19 crisis, the authors found that e-HRM systems helped keep operations afloat. Yet two hurdles persisted: inadequate technical support and employees digital skills, both of which curtailed the full rollout of tech-driven HR practices. Conversely, clear backing from senior leaders and a sound IT backbone emerged as key factors that shaped the overall success of this digital shift.

### **Employee Digital Competence**

Mazurchenko dan Zelenka (2022) examined how workers in the Czech Republic's construction and automotive industries build their digital skills. Although the firms are slowly bringing in new tools, the researchers discovered that employee training has lagged far behind, leaving many staff members unsure and reluctant to use the technology. Because of this gap, ongoing, hands-on learning has become vital if the workforce is to meet the demands of an increasingly digital workplace. Their study therefore highlights that companies must commit real resources to steady coaching and practical courses so that any push toward digital change can stick.

Straková et al. (2022) examined digitalisation through the lens of SME business models and uncovered a different set of hurdles. Although their study confirmed that new technologies can boost competitiveness and agility, many small and medium firms still struggle to manage the digitised processes they create. The authors noted that these enterprises often neglect investment in supporting areas like human-resources systems and in-house tech development. Their findings imply that digitalisation must encompass the full value chain, not just products and services, if firms want sustainable business continuity.

### **Smart Working in Organization**

Todisco et al., (2023) took an alternative angle by focusing on how smart working was rolled out in Italys public administration. Their research revealed that, although this model boosted organizational agility and allowed routines to persist during lock-downs, it also complicated the delicate balance between job duties and family time and made managers nervous about unchecked working hours. The authors observed that digital tools still praised for speed and efficiency carry hidden costs, as loose boundaries between

office tasks and home life heighten the odds of burnout and stress. Such evidence urges leaders to treat remote-work technology not as a purely technical upgrade but as a human system, one that demands careful attention to employees social needs and emotional well-being.

From the reviewed studies, a number of key insights emerge. First, while digitalising human-resources functions can yield clear gains, organisations still grapple with fragile IT infrastructure, insufficient digital know-how, and a workplace culture that pushes back against change. Second, the degree to which these tools actually succeed depends heavily on strong backing from top managers, general readiness to adopt new technology, and ongoing training that keeps employees learning. Third, socio-emotional issues-such as maintaining a sound work-life balance when smart-working arrangements are introduced-also warrant attention if firms wish to foster a healthy digital workplace.

## 5. CONCLUSION

Put simply, lots of studies point to the same thing: how well a company pulls off digital upgrades in HR really hinges on three things-tech maturity, staff know-how, and the everyday culture at work. At the same time, familiar roadblocks keep popping up: workers grumbling about new tools, gaps in basic digital skills, and shiny gadgets being rolled out before the rest of the company is ready. That means a winning, future-proof HR setup blends smart tech with people-first goals and a culture that loves learning. We still need more research, though, to nail down the most flexible and long-lasting way to steer that change.

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