

Human Resource Management Strategies for Improving Employee Performance in the Era of Digital Transformation: A Qualitative Study at a Technology-Based Company

Saripudin Saputra^{1*}, Nuniek Permata², Suaryo³, Andi Hasryningsih Asfar⁴

^{1,2,3,4} Bina Bangsa University Institution, Serang, Indonesia

*Corresponding Author: saputrasaripudin42@gmail.com

Article History

Received: 26-07-2026

Revised: 06-08-2026

Published: 30-08-2026

Keywords: Human Resource Management; Digital Transformation; Employee Performance; Qualitative Study; Technology Company

ABSTRACT

Digital transformation has fundamentally changed the way organizations manage human resources (HR), including in technology-based companies that stand at the forefront of digital innovation adoption. Most prior studies on HR management in the digital era remain dominated by quantitative approaches and literature reviews, leaving a gap in contextual and in-depth understanding of how such strategies are actually implemented in practice. This study aims to explore in depth the human resource management strategies applied to improve employee performance in technology-based companies amid the acceleration of digital transformation. This research employs a qualitative approach with a case study design. Data were collected through semi-structured interviews with human resource managers and employees, non-participant observation of daily work practices, and documentation studies of company policies and performance reports. Data were analyzed using an interactive analysis model consisting of data reduction, data display, and conclusion drawing, with data validity strengthened through source and method triangulation. The results indicate that effective HR management strategies in the digital era encompass four main dimensions: digitalization of recruitment and selection processes (e-recruitment), continuous digital competency development through e-learning platforms, the implementation of data-driven performance management systems (people analytics), and the strengthening of a technology-based collaborative work culture. This study also reveals challenges in the form of digital literacy gaps across employee generations and resistance to work culture change. These findings contribute theoretically to the development of strategic HRM concepts in the digital era and offer practical implications for HR managers in designing policies that are adaptive to technological dynamics.

INTRODUCTION

The Fourth Industrial Revolution and the acceleration of digital technology—marked by the convergence of artificial intelligence, big data, cloud computing, and business process automation—have driven organizations worldwide to undertake comprehensive digital transformation, including in human resource (HR) management (Lou et al., 2024; Sakarina et al., 2022). Digital transformation is not merely the adoption of new technologies, but rather a strategic and structural shift that requires organizations to redesign their work processes, leadership models, and organizational culture to remain adaptable to the rapidly changing business environment (Sofiyanto et al., 2024). In this context, human resource management occupies a highly strategic position because the success of digital transformation ultimately depends heavily on the readiness, competencies, and performance of the people operating the system (Adenuddin Alwy, 2022; Wahyudi et al., 2023).

Technology-based companies provide a highly relevant context for examining this phenomenon, as these organizations are at the forefront of implementing digital innovations while simultaneously facing intense competitive pressure to continuously innovate, accelerate product cycles, and retain digital talent whose competencies are highly sought after in the labor market (Hu & Zhu, 2021; Jani et al., 2021). In such companies, HR management is required not only to perform administrative functions but also to act as a strategic partner capable of designing recruitment policies, competency development, performance management, and a work culture that align with the rapid pace of technological change (Immanuella Anita Indroputri & Regi Sanjaya, 2024).

Various previous studies have confirmed that the digitization of HR management has a positive impact on operational efficiency and employee performance. Haque and Nishat (2022), for example, found that HR digitization significantly influences employee performance in industries in Bangladesh. Similarly, Novianti and Irmawati (2023) demonstrated that the implementation of digital human resource management (e-HRM) influences employee performance through work motivation and organizational culture. However, most of these studies employ quantitative survey-based approaches or take the form of literature reviews, and thus have not yet explored in a contextual and in-depth manner how these strategies are actually designed, implemented, and interpreted by organizational practitioners in the field (Sofiyanto et al., 2024; Ahsanul Hawa & Harto, 2023). This situation leaves a significant research gap, particularly in the context of technology-based companies, which have work characteristics, organizational cultures, and talent dynamics that differ from those of other sectors.

Bridging this gap is increasingly important, given that the complexity of the challenges faced by technology companies in managing human resources in the digital age cannot be fully explained through numerical data alone. Aspects such as resistance to change, intergenerational digital literacy gaps, and the process of adapting to work culture require a rich and nuanced understanding (thick description) that can only be obtained through a

qualitative approach (Dadang et al., 2024; Sufnirayanti & Zanra, 2023). Therefore, this study aims to answer the following questions: (1) how do technology-based companies implement human resource management strategies to improve employee performance in the era of digital transformation; and (2) what challenges are faced in implementing these strategies.

Based on the above, this study aims to: (1) explore in depth the HR management strategies implemented by technology-based companies to improve employee performance in the era of digital transformation; and (2) identify the challenges faced in implementing these strategies. Theoretically, this study is expected to enrich the body of research on strategic human resource management with a qualitative-contextual perspective. Practically, the results of this study are expected to serve as a reference for human resource managers and policymakers at technology companies in designing talent management strategies that are more adaptable to the dynamics of digitalization.

Human resource management (HRM) is conceptually understood as the process of planning, recruiting, developing, compensating, and retaining the workforce to achieve both organizational and individual goals (Dessler, 2019). Over time, HRM has evolved from being viewed merely as an administrative function to being recognized as a strategic function integrated with the organization's business direction (strategic human resource management). This strategic approach emphasizes that HR policies—from recruitment to performance management—must be designed in alignment with the organization's long-term goals, including those related to addressing technological disruption (Saimin et al., 2023). This strategic role is increasingly crucial in technology-based companies because the competitive advantage of such organizations depends heavily on the quality and speed of adaptation of their human capital (Ahsanul Hawa & Harto, 2023).

Digital transformation is a strategic change process that involves integrating digital technology into all aspects of an organization's operations to create new value, improve efficiency, and strengthen competitiveness (Sakarina et al., 2022). In the realm of HR management, digital transformation is realized through the implementation of human resource information systems (HRIS), e-recruitment platforms, applicant tracking systems (ATS), e-learning, and data-driven HR analytics (people analytics or HR analytics) (Jani et al., 2021). This digitization enables the automation of administrative processes such as attendance tracking, payroll, and performance evaluations, allowing HR managers to shift their focus to more strategic aspects, such as talent development and succession planning (Wahyudi et al., 2023).

Hu and Zhu (2021) emphasize that digital transformation requires an inductive reengineering of the talent value creation model, meaning organizations must rebuild the entire HR management cycle—from talent acquisition to retention—while taking into account the fast-paced and interconnected nature of the digital ecosystem. In line with this, a study by Jani, Muduli, and Kishore (2021) in India shows that the success of digital HR transformation is largely determined by the extent to which the HR function is able to act as a change agent,

rather than merely a user of technology. Furthermore, a literature review by Immanuella Anita Indroputri and Regi Sanjaya (2024) on digital HR transformation in the career development of Generation Z confirms that HR digitization also implies a shift in the expectations of younger employees toward a more personalized, flexible, and technology-driven work experience.

Employee performance refers to the quality and quantity of work achieved by an individual in carrying out tasks in accordance with their assigned responsibilities. In the digital age, employee performance is determined not only by technical competencies but also by the ability to adapt to technology, digital literacy, and employee engagement within an ever-changing work environment (Haryadi & Wahyuni, 2022). Research by Haryadi and Wahyuni (2022) found that employee engagement acts as a mediating variable linking competencies and the work environment to employee performance, indicating that performance improvement strategies in the digital era must consider psychological and motivational aspects—not merely technological ones. This finding is reinforced by Novianti and Irmawati (2023), who demonstrate that the implementation of e-HRM can enhance employee performance when accompanied by strengthened work motivation and a supportive organizational culture.

Based on the synthesis of the theoretical review above, this study proposes a theoretical framework in which HR management strategies in the era of digital transformation at technology-based companies can be mapped into four interrelated strategic dimensions, namely: (1) digitization of recruitment and selection; (2) continuous development of digital competencies; (3) data-driven performance management; and (4) strengthening a technology-based collaborative work culture. These four dimensions are assumed to interact simultaneously in influencing employee performance; however, their implementation in the field is expected to face contextual challenges in the form of intergenerational digital divides and resistance to changes in work culture (Dadang et al., 2024; Sufnirayanti & Zanra, 2023). This conceptual framework serves as the analytical reference for exploring the field data in this study.

METHOD

This study employs a qualitative approach using a case study design, which aims to gain an in-depth, contextual, and nuanced understanding of the phenomenon of HR management strategies in improving employee performance at technology-based companies (Sugiyono, 2022; Creswell & Creswell, 2022). The qualitative approach was chosen because it is capable of revealing meanings, processes, and social dynamics that cannot be fully explained through a quantitative approach (Hasibuan et al., 2022).

Research subjects were selected using purposive sampling, which involves choosing informants considered to have the deepest understanding of and direct experience with the phenomenon under study. The research informants consisted of human resources managers, team leaders, and operational staff/software engineers at technology-based companies that

have implemented HR digitalization initiatives. The number of informants was adjusted according to the principle of data saturation, whereby data collection is halted when no new significant information is found.

Data was collected through three main techniques. First, in-depth semi-structured interviews with key informants to explore their perceptions, experiences, and the meanings they constructed regarding HR digitalization strategies. Second, non-participant observation of daily work practices, including the use of digital platforms in recruitment, training, and performance evaluation processes. Third, a documentary study of HR policies, performance reports, and digital training materials used by the company (Hardani et al., 2020).

The collected data were analyzed using an interactive analysis model comprising three stages: data reduction, data display, and conclusion drawing/verification, which were conducted cyclically until the data reached saturation (Hardani et al., 2020). Data reduction was performed by identifying and categorizing the main themes that emerged from the interview transcripts and field notes. Data presentation was conducted in the form of a thematic matrix to facilitate the interpretation of patterns of relationships between themes. Conclusions were drawn gradually and re-verified through re-reading the raw data.

The validity of the data in this study was strengthened through source triangulation—comparing information from various informants at different job levels—as well as methodological triangulation—comparing interview results with observations and documentation. In addition, member checking was also conducted, which involves reconfirming the researcher's interpretations with the informants to ensure the accuracy and credibility of the findings (Sugiyono, 2022).

RESULTS AND DISCUSSION

Based on the results of interviews, observations, and a review of documents, this study identifies four main themes of HR management strategies implemented by technology-based companies to improve employee performance in the era of digital transformation, as summarized in Table 1, as well as one additional theme regarding implementation challenges. Digitization of Recruitment and Selection

Research findings indicate that the technology-based companies studied have integrated applicant tracking systems (ATS) and e-recruitment platforms into their talent acquisition processes. Informants at the HR manager level stated that the digitization of recruitment accelerates the candidate screening process, expands the reach of the global talent search, and enhances the objectivity of selection through digital competency-based assessments. These findings align with studies on digital transformation in HRM, which confirm that the implementation of ATS and online platforms significantly improves the efficiency and effectiveness of recruitment and selection processes in organizations that have comprehensively adopted digital transformation. However, field observations also reveal that the effectiveness of these systems heavily depends on the quality of the initial screening

algorithm design; if not carefully designed, it risks overlooking potential candidates with non-conventional backgrounds.

Sustainable Digital Competency Development

The second prominent theme emerging from the field data is companies' commitment to conducting sustainable digital competency development through e-learning platforms, interactive simulation training, and upskilling and reskilling programs. Informants reported that the company routinely provides online learning modules accessible at any time, accompanied by internal mentoring sessions to ensure intergenerational knowledge transfer among employees. This finding aligns with the results of a study by Tiara et al. (2023), which confirms that digital-based training and development—through online learning, interactive training platforms, and simulation technology—play a crucial role in accelerating employee competency development in the digital age. However, some informants at the operational level noted that the high intensity of learning sometimes leads to additional cognitive overload amid equally high job demands, necessitating more flexible learning scheduling strategies.

Data-Driven Performance Management (People Analytics)

The third theme reveals that companies have shifted from conventional annual performance evaluation systems toward continuous performance management systems, which utilize analytics dashboards to monitor productivity, target achievement, and key performance indicators (KPIs) in real time. HR managers stated that this approach enables faster, evidence-based feedback, allowing employees to adapt their performance accordingly. These findings reinforce the results of a study by Lou, Hong, and Li (2024) on information and communication technology (ICT) companies, which showed that digital transformation in HR management and development contributes significantly to sustainable job performance and innovative work behavior. In line with this, the findings of Haque and Nishat (2022) in the industrial sector in Bangladesh also confirm that the digitization of HR functions has a positive impact on employee performance. Nevertheless, this study also found that some employees experience psychological stress due to what they perceive as overly intensive data-driven monitoring (algorithmic surveillance), which has the potential to undermine psychological safety if not managed with a human-centered approach.

Strengthening a Technology-Based Collaborative Work Culture

The fourth theme indicates that technology-based companies strengthen a collaborative work culture through digital communication platforms, flexible working arrangements, and a digital leadership style (e-leadership) that emphasizes transparent communication and participatory decision-making. Informants at the team-leader level emphasized that leadership transformation is key to the success of HR digitalization, as technology alone will not be effective without accompanying changes in adaptive leadership styles. This finding is consistent with the results of studies by Sofiyanto, Isa Anshori, and Andriani (2024) on leadership transformation in strategic management in the digital era, as well as the study by

Raharjo and Prasetyo (2024), which affirms that digital competencies (e-skills) and digital leadership (e-leadership) are critical factors in enhancing employee performance in a digitized work environment.

Challenges: Intergenerational Digital Divide and Resistance to Change

In addition to the four strategies mentioned above, this study also identified significant challenges in implementing HR digitalization, namely the intergenerational digital literacy gap among employees and resistance to changes in work culture. Older-generation employees tend to require a longer adaptation period to new digital systems compared to younger employees who have grown up with digital technology. This finding aligns with the results of a study by Dadang et al. (2024), which highlights both the opportunities and challenges of HR management in the Society 5.0 era, including intergenerational digital competency gaps. In line with this, Sufnirayanti and Zanra (2023) also emphasize that the sustainability of employee performance improvements in the digital era heavily depends on HR management strategies capable of addressing resistance to change through persuasion rather than coercion.

Integrative Discussion

Overall, the findings of this study reinforce the argument that HR management strategies in the era of digital transformation cannot be understood in isolation but rather as a strategic ecosystem in which the digitization of administrative processes, competency development, data-driven performance management, and the strengthening of a collaborative work culture are mutually integrated. These findings enrich the perspective of strategic HR management (Dessler, 2019; Saimin et al., 2023) by demonstrating, in a contextual manner, how these four dimensions interact in real-world practice within technology-based companies—a phenomenon that has not been extensively explored in previous quantitative studies or literature reviews (Sofiyanto et al., 2024; Ahsanul Hawa & Harto, 2023).

Furthermore, findings regarding the challenges of algorithmic surveillance and the intergenerational digital divide indicate that the success of HR digitalization is not solely determined by technological sophistication, but rather by an organization's ability to manage the human dimensions of this change—a finding that expands our understanding of the digital talent reengineering model proposed by Hu and Zhu (2021).

CONCLUSION

This study concludes that effective human resource management strategies for improving employee performance in technology-based companies in the era of digital transformation encompass four key, mutually integrated dimensions: the digitization of recruitment and selection; continuous development of digital competencies; data-driven performance management (people analytics); and the strengthening of a collaborative work culture based on digital technology and supported by adaptive digital leadership. On the other hand, this study also reveals that the implementation of these strategies faces challenges in the form of intergenerational digital literacy gaps among employees, resistance to changes in

work culture, and the potential for psychological stress resulting from overly intensive algorithm-based performance monitoring.

Theoretically, these findings enrich the strategic HR management framework by demonstrating how the four dimensions of digital strategy interact contextually in real-world organizational practices, while also underscoring the importance of the human dimension in the success of digital HR transformation. Practically, the results of this study recommend that HR managers at technology-based companies design digitalization policies that are not only oriented toward technological efficiency but also take into account employees' psychological readiness and intergenerational digital competency gaps—for example, through intergenerational mentoring programs and more flexible learning schedules.

This study has the limitation of being a single-case study; therefore, its findings cannot be broadly generalized to all technology-based companies. Consequently, future research is encouraged to employ a multiple-case study design or a mixed-methods approach to test and expand the reliability of the findings across a more diverse range of technology companies.

REFERENCES

- Adenuddin Alwy, M. (2022). Human resource management in the digital era through the lens of next-generation human resource managers. *SIBATIK Journal: Scientific Journal of Social, Economic, Cultural, Technology, and Education*, 1(10), 2265–2276. <https://doi.org/10.54443/sibatik.v1i10.334>
- Ahsanul Hawa, N., & Harto, B. (2023). HR planning strategies in the digital era that improve employee well-being. *Journal of Business Administration*, April, 1–17.
- Creswell, J. W., & Creswell, J. D. (2022). *Research design: Qualitative, quantitative, and mixed methods approaches* (6th ed.). SAGE Publications.
- Dadang, A. M., Munir, S., Rinaldi, F., Sukmana, I. T., & Supriatna, M. D. (2024). Improving Employee Productivity: Opportunities and Challenges of Human Resource Management in the Era of Society 5.0. *Eduonomika Scientific Journal*, 8(2).
- Dessler, G. (2019). *Fundamentals of Human Resource Management* (5th ed.). Pearson.
- Haque, M., & Nishat, S. (2022). The Impact of Human Resource Digitalization on Employee Performance in Bangladeshi Industrial Enterprises. *European Journal of Business and Management Research*, 7(4), 192–198. <https://doi.org/10.24018/ejbmr.2022.7.4.1540>
- Hardani, Andriani, H., Ustiawaty, J., Utami, E. F., Istiqomah, R. R., Fardani, R. A., Sukmana, D. J., & Auliya, N. H. (2020). *Qualitative & Quantitative Research Methods*. Pustaka Ilmu.
- Haryadi, A., & Wahyuni, P. (2022). Analysis of employee engagement as a mediating variable between competency and work environment on employee performance at the Yogyakarta Special Region Transportation Agency. *Journal of Community Development in Asia*, 5(2). <https://doi.org/10.32535/jcda.v5i2.1495>

- Hasibuan, A. T., Sianipar, M. R., Ramdhani, A. D., Putri, F. W., & Ritonga, N. Z. (2022). Concepts and characteristics of qualitative research and their differences from quantitative research. *Tambusai Education Journal*, 6(2), 8686–8692.
- Hu, H., & Zhu, Y. (2021). Talent value creation during digital transformation: An inductive human resource reengineering model. *Journal of Business Administration Research*, 4(4). <https://doi.org/10.30564/jbar.v4i4.3703>
- Immanuella Anita Indroputri, & Regi Sanjaya. (2024). Digital transformation in human resource management and its role in Gen Z career development: A systematic literature review. *Petra International Journal of Business Studies*, 7(1), 48–56.
- Jani, A., Muduli, A., & Kishore, K. (2021). Human resource transformation in India: Examining the role of digital human resource technology and the role of human resources. *International Journal of Organizational Analysis*, 31(4), 959–972. <https://doi.org/10.1108/ijoa-08-2021-2886>
- Lou, Y., Hong, A., & Li, Y. (2024). Assessing the role of HRM and HRD in enhancing sustainable job performance and innovative work behaviors through digital transformation in ICT companies. *Sustainability*, 16(12), 5162. <https://doi.org/10.3390/su16125162>
- Novianti, N., & Irmawati, I. (2023). Analysis of the implementation of digital human resource management (e-HRM) and the influence of work motivation on employee performance with organizational culture as an intervening variable at PT. PLN (Persero) Wonogiri Region. *Management and Business*, 5(2), 62–77.
- Raharjo, F. Y. S., & Prasetyo, F. I. (2024). E-skills and e-leadership: Important factors in improving employee performance in higher education in the digital era. *Journal of Tax Accounting and Digital Economic Policy*, 1(3), 251–269.
- Saimin, Salim, N., Ariyanto, E., & Imaningsih, E. S. (2023). The role of human resource management in improving employee work productivity in the digital era. *UBS Journal of Economics and Business*, 12(1), 260–268.
- Sakarina, S., Ena, Z., Jenita, Cakranegara, P. A., & Surahman, S. (2022). Digital transformation in human resource management in the industrial age 4.0. *Quantitative Economics and Management Studies*, 3(5), 750–756.
- Sofiyanto, M., Isa Anshori, M., & Andriani, N. (2024). Leadership transformation in strategic management in the digital era: A literature review. *Jurnal Masharif Al-Syariah: Jurnal Ekonomi dan Perbankan Syariah*, 9(1), 290–297. <https://doi.org/10.30651/jms.v9i1.21057>
- Sufnirayanti, & Zanra, S. W. (2023). Human resource management strategies for improving sustainable employee performance in the digital era. *Jurnal Catatan*, 7(2), 213–227.
- Sugiyono, (2022). *Quantitative, qualitative, and R&D research methods*. Alfabeta.
- Tiara, L. C., Lestari, H. R., Kholifah, C. D. N., Zulfi, R. F. F., & Anshori, M. I. (2023). Digital-based training and development: Implementation of online learning,

interactive training platforms, and simulation technology in employee development.
Jurnal Bintang Manajemen.

Wahyudi, A., Assyamiri, M. B. T., Aluf, W. Al, Fadhilah, M. R., Yolanda, S., & Anshori, M. I. (2023). The impact of digital era transformation on human resource management. Jurnal Bintang Manajemen, 1(4).