

Human Resource Development to Improve Competitive Advantage in the Digital Era

Farand Qolbi Urdha¹, Farel Ramadhan², Adli Al Ghani³, Dian Prihardini Wibawa⁴

¹²³⁴Program Studi Manajemen, Fakultas Ekonomi dan Bisnis, Universitas Bangka Belitung

*Corresponding author Farand Qolbi Urdh

Email: farandqolbi13@gmail.com

Article History:

Received: November 28, 2025

Revised: December 10, 2025

Accepted: December 12, 2025

Keywords:

Digitalization, Competitive Advantage, Employee Training, Human Resource Development, Competency-Based Recruitment.

How to Cite

Urdha, F. Q., Ramadhan, F., Al Ghani, A., & Wibawa, D. P. (2026). Human Resource Development to Improve Competitive Advantage in the Digital Era. *ITQAN: Journal of Islamic Economics, Management, and Finance*, 5(1), 89–93. <https://doi.org/10.57053/itqan.v5i1.147>.

Abstract: *The purpose of this study is to analyze human resource development strategies to enhance organizational competitive advantage in the digital era. This study uses a qualitative method with a literature review approach. The analysis then focuses on HR development strategies. The results of this study indicate that the combination of competency-based training strategies, structured recruitment, leadership development, and the implementation of digital technology in HR management is a determining factor in creating organizational competitive advantage. This study has presented a holistic framework that integrates traditional HR development strategies with digital transformation. The results of this study guide management practitioners and policymakers in formulating adaptive and sustainable HR development strategies by integrating digital technology in every aspect of HR management.*

Introduction

Human resources become the most valuable asset in any modern organization (Rahmawati et al., 2024; Salasiah et al., 2023; Todericiu et al., 2014). Then, current conditions of global competition and technological change require human resource capabilities (Firdaus & Kuswinarno, 2024). Digital transformation also creates new demands for the workforce to master technical and non-technical skills relevant to the modern era (Astawaa & Dewi, 2025; Iskandar, 2025). Digital transformation requires a new approach to human resource management. Technology is used in HR information systems for data analysis, increased efficiency, and decision-making support (Ayyasy & Maelani, 2024). Digital transformation has become a necessity in human resource management across organizations. This allows HR to focus on strategic tasks.

Leadership plays a crucial role in driving digital transformation, but research on the characteristics of effective leadership in the digital age remains limited (Damayanti et al., 2024). Many studies discuss traditional leadership theories without adequately exploring the need for new leadership styles to navigate rapid change in a digital environment. There is a lack of understanding of how leaders can create a culture of innovation that supports human resource engagement and adaptation to new technologies. This opens up opportunities for further research into relevant and effective leadership strategies to address the challenges of the digital age.

Transformative leadership is a leadership style that emphasizes individual development within an organization. Transformative leaders drive change with a clear vision (Ambawani et al., 2024). They focus on achieving goals and strive to shift mindsets

and values to create a positive work environment. The presence of these leaders can also inspire enthusiasm and encourage more active contributions.

Transformative leadership focuses on inspiring and motivating employees, and building commitment to employee development (Salsabila et al., 2024). Then, leaders who can adapt to change and encourage innovation can create a conducive work environment. Furthermore, an organizational learning culture also helps create an ecosystem that supports employee growth. This culture encourages human resources to innovate, share knowledge, and learn from the experiences necessary to face the challenges of the digital era (Gumilar, 2023). Therefore, this study aims to explain human resource development strategies to enhance competitive advantage in the digital era.

Method

This research uses a qualitative method with a literature review approach. Data were sourced from Google Scholar, SINTA, and national and international journal repositories. In this study, the keywords used were "digitalization," "competitive advantage," "employee training," "human resource development," and "competency-based recruitment." Data were analyzed using the classifications of recruitment, training, career development, digital transformation, and leadership. Category groupings were used to explain contributions to HR development

Result and Discussion

This section discusses human resource development strategies to enhance an organization's competitive advantage in the digital age. This is outlined in detail below.

Human Resource as Foundation

Human resource development becomes the primary foundation for building competitive advantage within an entity. As a description, human resources have the advantage of creating added value through their competencies and abilities (human capital). This impacts organizational performance sustainably (Slavkovi, 2023). Human resources are also a strategic asset in determining an entity's ability to adapt to technological changes and market dynamics through digitalization (Kuzior et al., 2022).

Kuzior et al. (2022) identified that human resource development consists of four dimensions, namely: (1) the technical dimension, which includes technical skills (hard skills) and mastery of technology in response to the demands of the digital era; (2) the soft skills dimension, such as communication skills, collaboration, problem-solving abilities, and leadership that support team performance and organizational effectiveness (Kainzbauer et al., 2021); (3) the career development dimension, namely career planning, training, and promotions that strengthen employee engagement and retention (Sciences & Economics, 2023); and (4) the organizational culture dimension that encourages continuous learning through organizational learning practices and an adaptive learning culture (Kainzbauer et al., 2021). Entities that manage these four dimensions in an integrated manner tend to be more competitive. This is due to the ability to build HR capabilities aligned with the needs of a dynamic, complex, and rapidly changing business environment (Slavkovi, 2023).

Competency-Based Recruitment

Competency-based recruitment has become a strategy in human resource development. It makes entities able to recruit qualified human resources who align with their technical, behavioral, and cultural values (Kainzbauer et al., 2021; Slavkovi, 2023).

Then, in the digital era, competency-based recruitment is supported by technologies such as Applicant Tracking Systems (ATS) and digital skills assessments. Besides that, competency-based recruitment also supports big data analytics to improve objectivity, selection accuracy, and accelerate decision-making (Kuzior et al., 2022; Septiani et al., 2024). Furthermore, data analytics can help entities identify performance-based competency patterns (Sulistyawati & Munawir, 2024). With the proper HR foundation from the recruitment stage, entities are expected to produce a workforce that is adaptive, collaborative, and ready to face change. Ultimately, this recruitment strategy supports human resource development (Slavkovi, 2023).

Continuous Training and Development

Continuous training and development become key elements in improving human resources in the digital era. Then, human resources have played an essential role in preparing employees to adapt to technological changes and also current job demands (Rahmawati et al., 2024). Training programs with a focus on improving technical skills and strengthening soft skills, motivation, and employee engagement, which impact performance (Hasanah & Pasaribu, 2025). The use of Learning Management Systems (LMS), microlearning, virtual training, and digital upskilling and reskilling programs has provided flexibility and effectiveness in the learning process. This allows employees to learn independently, adaptively, and in line with job requirements (Risman, 2024; Tobing et al., 2023). Therefore, entities that consistently develop their employees' competencies through continuous training have higher levels of innovation and competitiveness, and respond to competitive challenges in the global market (Firdaus & Kuswinarno, 2024).

Digital Transformation in HR Management

Digital transformation in HR management involves Human Resource Information Systems (HRIS). It is automated administrative processes and HR data analytics. It is used for improving operational efficiency. In addition, this method is used to improve the quality of strategic decision-making in organizations (Haratua et al., 2025). Digitalization also drives the transformation of HR from an administrative to a strategic role—for instance, in talent management, succession planning, and data-driven competency development. HR can make a significant contribution to achieving organizational goals (Mahmudah et al., 2024). (Nazarudin & Kuswinarno, 2024) describe that the use of digital technology in HR management encourages organizations to be responsive to changes in the business environment and dynamic workforce needs. This study found that digital transformation in HR management also contributes significantly to creating competitive advantage. In this case, organizations that have utilized data and technology tend to be more adaptive, efficient, and innovative than conventional ones (Judijanto et al., 2025).

Conclusion

This study analyzed human resource development strategies to enhance organizational competitive advantage in the digital era. The study shows that human resource development is key to an entity's competitive advantage in the digital era. Human resource development encompasses competency-based recruitment, continuous training, leadership development, digital transformation, and a learning culture. Digitalization of HR management also accelerates processes, improves efficiency, competitiveness, and increases the entity's resilience to change. The study integrated the perspectives of human capital, resource-based view, and organizational learning for sustainable human resource development. As an implication of this research,

stakeholders need to pay attention to data-driven HR planning, recruitment, digital technology integration, a culture of continuous learning, and transformative leadership.

Acknowledgments

The author would like to thank the lecturers and supervisors who provided guidance and support throughout this research process. Then, their active participation was crucial in enriching the data and information generated, ensuring that this journal can benefit readers and advance knowledge in the field of human resources. The author would like to thank his family and friends for their moral support and encouragement throughout the development of this journal. Their support provided strength and encouragement to continue working and innovating. It is hoped that the results of this research will serve as agents of change in human resource development in the digital era.

References

- Ambawani, C. S. L., Saputra, I., Kusuma, T. M. M., Sumardjoko, B., & Fathoni, A. (2024). Implementasi kepemimpinan transformasional kepala sekolah penggerak di TK. *Journal of Education Research*, 5(4), 4810–4823.
- Astawaa, I. P. P., & Dewi, I. A. U. (2025). Transformasi Bisnis di Era Digital: Peran Strategis Kecerdasan Buatan dalam Inovasi dan Keunggulan Bersaing. *RESI : Jurnal Riset Sistem Informasi*, 4(1), 314–320. <https://doi.org/10.32795/n78xst47>.
- Ayyasy, A. N., & Maelani, S. (2024). Tantangan Kompetensi SDM dalam Menghadapi Era Digital: Sebuah Literatur Review. *Jurnal Ilmu Sosial, Manajemen, Akuntansi Dan Bisnis*, 1(2), 53–59.
- Damayanti, S., Setiawan, W. D., Pangestu, S. E., Pribadi, S. A., & Argadinata, H. (2024). Transformasi kepemimpinan digital sekolah dasar dalam menuju efisiensi dan transparansi di era digital. *Proceedings Series of Educational Studies*, 6, 1–9.
- Firdaus, M. A. A., & Kuswinarno, M. (2024). Strategi Inovatif dalam Pengembangan Sumber Dana Manusia dalam Meningkatkan Daya Saing Perusahaan di Era Digital. *Jurnal Media Akademik (JMA)*, 2(11), 1–19. <https://doi.org/10.62281/v2i11.1033>.
- Gumilar, N. (2023). *Budaya Organisasi Dan Kepemimpinan di Dunia Pendidikan*. PT KIMHSAFI ALUNG CIPTA.
- Haratua, C. S., Purnama, R. N., Pramesti, Arifin, W., & Nadila, S. A. (2025). Pentingnya Sistem Management SDM berbasis Teknologi di Era Digital terhadap Kinerja Karyawan. *SOCIAL: Jurnal Inovasi Pendidikan IPS*, 5(2), 506–514. <https://doi.org/10.51878/social.v5i2.5729>.
- Hasanah, U., & Pasaribu, R. (2025). Implementasi Pelatihan dan Pengembangan Karyawan di Era Digital. *Socius: Jurnal Penelitian Ilmu-Ilmu Sosial*, 2(11). <https://doi.org/10.5281/zenodo.15769636>.
- Iskandar, I. (2025). Peran Strategis Transformasi Digital dalam Meningkatkan Daya Saing UMKM Tekstil Indonesia. *Journal of Trends Economics and Accounting Researc*, 5(4), 498–506. <https://doi.org/10.47065/jtear.v5i4.2089>.
- Kainzbauer, A., Rungruang, P., & Hallinger, P. (2021). How Does Research on Sustainable Human Resource Management Contribute to Corporate Sustainability : A Document Co-Citation Analysis , 1982 – 2021. *Sustainability*, 13(11745.), 1–21. <https://doi.org/10.3390/su132111745>.
- Kuzior, A., Kettler, K., & Łukasz, R. (2022). Digitalization of Work and Human Resources Processes as a Way to Create a Sustainable and Ethical Organization. *Energies*,

- 15(172), 1–13. <https://doi.org/10.3390/en15010172>.
- Mahmudah, A. N., Dewi, Y., & Ismail, I. (2024). Optimalisasi Fungsi Manajemen Sumber Daya Manusia dalam Meningkatkan Kinerja Karyawan di Era Digital. *Jurnal Media Akademik (JMA)*, 2(12), 1–20. <https://doi.org/10.62281/v2i11.1039>.
- Nazarudin, M. A., & Kuswinarno, M. (2024). Transformasi digital dalam pengelolaan SDM: Tantangan dan peluang di era industri 5.0. *Jurnal Media Akademik (JMA)*, 2(11).
- Rahmawati, F. D., Al-Habsyi, A. Z. A., & Mardiyah. (2024). Pengembangan Sumber Daya Manusia dalam Meningkatkan Produktivitas Kinerja Pegawai. *An-Nadzir: Jurnal Manajemen Pendidikan Islam*, 02(02), 107–123. <https://doi.org/10.55799/annadzir.v2i02.572>.
- Risman. (2024). Strategi Pelatihan Karyawan untuk Meningkatkan Kinerja Organisasi: Peran Teknologi dan Adaptasi Program di Berbagai Sektor Pendahuluan. *PARADOKS: Jurnal Ilmu Ekonomi*, 7(1), 56–68. <https://doi.org/10.57178/paradoks.v7i1.946>.
- Salasiah, Jamil, Jubaidi, A., & Ghufron. (2023). Role of Human Resource Management in Organizations. *Journal of Economic, Religious, and Entrepreneurship (JoERE)*, 1(2), 84–92. <https://doi.org/10.60046/joere.v1i2.64>.
- Salsabila, E. N., Putri, N. F. R., & Wildan, M. A. (2024). Peran Kepemimpinan Transformasional Dalam Pengembangan Sumber Daya Manusia. *J-CEKI: Jurnal Cendekia Ilmiah*, 4(1), 727–739.
- Sciences, O., & Economics, F. (2023). administrative sciences The Holistic Model of Labour Retention : The Impact of Workplace Wellbeing Factors on Employee Retention. *Administrative Sciences*, 13(21), 1–25. <https://doi.org/10.3390/admsci13050121>.
- Septiani, A. D., Novianti, D., & Julianty, S. N. (2024). Penggunaan Rekrutmen dan Seleksi Online dalam Mengelola Sumber Daya Manusia di Era Digital 4 . 0 Memiliki Dampak yang Signifikan terhadap Efektivitas Manajemen SDM. *Paraduta: Jurnal Ekonomi Dan Ilmu-Ilmu Sosial*, 2(2), 64–74. <https://doi.org/10.56630/paraduta.v2i2.685>.
- Slavkovi, M. (2023). Sustainability of Human Capital Efficiency in the Hotel Industry: Panel Data Evidence. *Sustainability*, 15(2268), 1–16. <https://doi.org/10.3390/su15032268>.
- Sulistyawati, U. S., & Munawir. (2024). Decoding Big Data: Mengubah Data Menjadi Keunggulan Kompetitif dalam Pengambilan Keputusan Bisnis. *Jurnal Manajemen Dan Teknologi*, 1(2), 58–71. <https://doi.org/10.63447/jmt.v1i2.1114>.
- Tobing, L., Harahap, D., Silangit, N., & Deliarta, R. (2023). Tinjauan Literatur tentang Efektivitas Pelatihan Berbasis Microlearning dalam Meningkatkan Literasi Digital Guru Pendahuluan. *Jurnal Literasi Digital*, 3(3), 150–159. <https://doi.org/10.54065/jld.3.3.2023.598>.
- Todericiu, R., Luciaa, F., & Stăni, A. (2014). Reflections on Human Resources – Vital Intangible Assets of Organizations. *Procedia Economics and Finance*, 16(May), 575–579. [https://doi.org/10.1016/S2212-5671\(14\)00842-9](https://doi.org/10.1016/S2212-5671(14)00842-9).